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R. A. I. C.
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MARCH 1948

THE astonishing thing about the new buildings for the United Nations is the apparent unanimity of opinion of its designers in favour of contemporary architecture. To most of us any other approach would be unthinkable, but that such a problem could be solved, without compromise, by a committee composed of architects of many races and many points of view shows how far we have come in just over one hundred years. As recently, architecturally, as 1844, the Houses of Parliament at Westminster were won in competition by Sir Charles Barry. In that heyday of eclecticism, the designs submitted covered the whole gamut of architectural styles, and Sir Charles, the winner, played the field with twelve, of which "Gothic" won by several lengths over "Italian Renaissance".

PERHAPS even greater confusion reigned in the International Competition for a design for the Peace Palace at the Hague. By 1907 more picture books were available, travel was easier and the architect was unworthy of the name who was not on intimate archaeological terms with Amiens Cathedral, the Parthenon, the Alhambra at Granada and the Pyramid of Cheops. We have a portfolio in which the winning and commended designs for the Peace Palace are illustrated, and it is as instructive to the student of history as the pages of Banister Fletcher. However, if the exteriors were drawn from the masterpieces of the Christian and pagan world, there was a consistency in planning. Over all was the dead hand of the Ecole des Beaux Arts on the Rue of that name. The winning design was in a flamboyant French Gothic manner, which succeeded in being Gothic, but failed to be flamboyant. All the frustrations, all the humiliations, all the failures of a generation seem to be frozen and embodied in that dreary mass of stone and brick. It offered no hope — it seemed unconcerned with peace.

IT has been observed on many occasions that the winning design in International Competitions is inferior to the second prize. It is as though international juries, fearful of the implications of their decision, recognized ability and imagination in design, and passed it by in favour of the safe and mediocre. It was so with the Tribune Tower where Saarinen came second to the pseudo Gothic Tower of Hood, and with the League of Nations Building in Geneva where Le Corbusier's design will long be remembered by architects after the winner's design is forgotten. The United Nations decided wisely against a competition with all its delays, its wasted effort, and with the foregone conclusion that the best design would remain for ever on paper in second place. Instead, the architects were appointed immediately. They proceeded with the job with their client, the world, looking on; their sketches have been illustrated in popular and technical magazines, and if we don't like them we can say so, either publicly or privately, through our national representative who is a member of the designing committee.

IT has been said that the Chicago Exhibition of 1851 was remarkable for the fact that it was not designed by Louis Sullivan: that the New York Fair gained notoriety from the fact that it was not designed by Frank Lloyd Wright. Posterity cannot say that the U.N. building suffered from the absence of Le Corbusier. However good his colleagues may be, and some of them have proved their worth in many lands, a board of architects, speaking many tongues, from countries as vastly different as Canada and Russia might easily produce a Tower of Babel. Le Corbusier commands the respect of the team — he seems to be as articulate in speech as he is on paper, and, from what one hears, he is no shrinking violet when he has a point to make.

THE Editorial Board is grateful to Mr. Hugh Ferriss for the trouble he has taken in the preparation of the article which appears in this issue, and for the excellent collection of photographs which he has put at our disposal.

Editor

DESIGNING THE UNITED NATIONS HEADQUARTERS

By HUGH FERRISS, A.I.A.

An Address at the Fifty-Eighth Annual Meet ing of the Ontario Association of Architects

I AM delighted to come up to Toronto and to show you some of the preliminary studies for the U.N. Headquarters design. Please allow me to speak as informally as I would to any group of professional friends across the drafting board (and off the record!).

I am sorry that you are not to get a really comprehensive report directly from Wally Harrison; he, as chief architect, could give you all sides of this project; I can give you only the visual side. You already understand that I have been acting merely as a consultant in charge of perspective design-studies. My job was to find out what was in the minds of the various architects on the board in respect to overall design, and to record, sometimes combine, the ideas in quick day-to-day sketches. As I am deficient in languages, interpreters were necessary; however, we all had one language in common—pencil and sketch-pad. The result, to date, is a sort of pictorial diary. Mr. Steele kindly invited me to bring some of this material along, and I have a few slides with me. Since artists should be seen and not heard, let us get on to the slides at once.

In preface, let me go back for a moment to September, 1946. At that time New York City offered to the United Nations a tract of land, "Flushing Meadows," former site of the 1939 World's Fair, now a spacious public park. The invitation was extended by a committee appointed by Mayor O'Dwyer and headed by Hon. Robert Moses; and it was accompanied by a suggestive architectural treatment prepared by the Committee's Board of Design, Gilmore D. Clarke, Chairman, Messrs. Embury, Harrison, Skidmore, architect-members.

Perspective design-studies were made, two of which are shown herewith (Plates 1 and 2). Without detaining you on details of a superseded scheme, you may note, at a glance, that the designers (some of whom were to be retained, later, by U.N. itself) were at that time interested in horizontal masses freely disposed around open courts in ample, landscaped grounds. In this connection, also note that the site then before us was approx. 350 acres, set in an even larger park.

PLATE 2

While the foregoing drawings were being exhibited (in a building erected for the purpose, adjoining the hall where the U.N. Assembly was then meeting) another set of perspectives was started, visualizing an entirely unrelated project, a private business-residential development on a six-block site in Manhattan, on the East River, 42nd to 48th Sts. These drawings were made for Mr. William Zeckendorf who had originated the project and assembled the parcels of land and they were based on the plans of the architectural firm which had been retained on the project, Harrison and Abramovits. One of the drawings, shown herewith (Plate 3) roughly indicates the vertical massing then in mind. In this case, note that the site under consideration was approx. 17½ acres.

PLATE 1

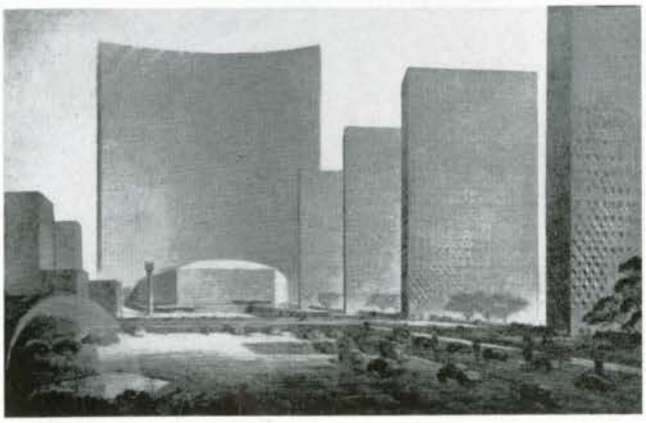


PLATE 3

On December 12, 1946, the morning papers carried the news that Flushing Meadows as a U.N. site was in the discard, that the private project for the East River site was in the discard, that Mr. Rockefeller had offered to purchase the East River site as a gift to U.N., and that U.N. was to accept or reject the offer that evening.

The story of this dramatic, eleventh-hour development has often been told, and I have only one minor detail to add. As one read the news at the breakfast table, some obvious thoughts came to mind. Probably many of the U.N. Site Committeemen, gentlemen from abroad, had never seen this East River site or even heard of it. If they inspected it immediately, as they probably would (and did) they, being laymen, might be unable to visualize orderly and ample U.N. buildings on this comparatively small site, especially as it was then littered with obsolete structures. It might be helpful to them if they had before them, that evening, a sketch, no matter how hasty, showing the architectural possibilities. The devil of it was, how do you design a "world capital" between breakfast and supper? But even with no thoughtful design possible, might it not still be helpful if they had before them something to indicate that the site would take enough sheer cubage, enough mass of whatever shape, to adequately house U.N.? As to this, we already had on hand drawings showing more cubage on that site than U.N. could possibly need at this time.

After some telephoning with the New York officials and architects already involved and after some designing, so to speak, over the phone, this sketch (Plate 4) was turned out in such haste that the helicopter at upper left came in as the drawing was being carried down in the elevator. Useful or not, the sketch was a lot of fun to make.

In due time, news came out that U.N. had accepted the site, that an international board of Design-Consultants was to be set up, that the United Nations had appointed Wallace K. Harrison as Director of Planning and that work space for the Planning Staff had been taken in the R.K.O. building.

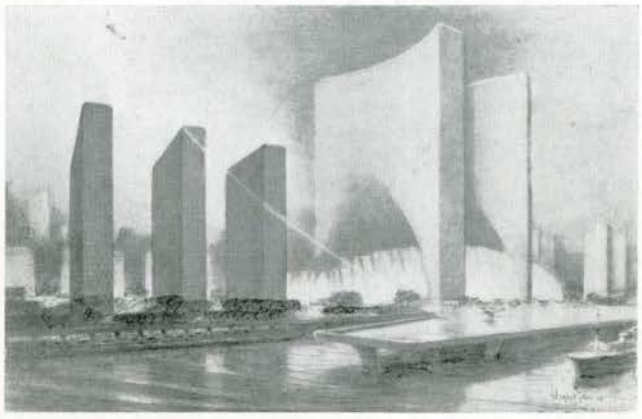


PLATE 4

An organizing meeting of the staff was held January 23, 1947—just a year ago, yesterday. The view out the window was about as shown in Plate 5, Rockefeller Plaza buildings in the foreground, U.N. site at upper-left. This sketch is included merely because so many visitors from abroad expressed the feeling that Rockefeller Plaza was the last word in U.S. architecture and might even be the prototype for U.N. architecture. We in New York are rather used to Rockefeller Plaza by now, and I personally doubted if Mr. Harrison, although he was, of course, one of the architects of the Plaza buildings, would share this feeling from abroad; indeed, as you will see, a fresh approach for U.N. architecture was in the offing.

The large conference room in the R.K.O. building, from which this sketch was made, was the scene of the Planning Staff's daily meetings. The private offices of Mr. Harrison, and his Deputy, Max Abramovitz, also the drafting room, adjoined the Conference Room to the East; space for model-making and perspective-studies, to the West. If you dropped into the Conference Room, any lunch-hour, you would see plans, sections, elevations being brought in from the drafting room, also models and perspectives, all the work of the previous 24 hours. The Board of Design Consultants usually met at 2.30 p.m. Mr. Abramovitz detailed the progress since the day before, explaining the drawings and models. Mr. Harrison then asked the architects if they cared to comment. They invariably did. "Comment" might continue to 4, 5 or 6 p.m. Then all the material, plus comment, went back to drafting room, etc., for another 24 hour go.

A unique thing about this problem was that when the architects started out, they had no program of requirements. (A gentleman in the audience indicates that absence of program is *not* unique. He must be an architect. Well, in this case, the absence was at least monumental.)

The complex, detailed, prolonged and successful effort of the Planning Staff to establish a program is certainly one of its great achievements; however, this task is all fully set forth in the widely published report of July, 1947.

Even without the program, it was obvious from the first that, theoretically, the council, conference and committee rooms, including the Assembly could be housed on one, maybe two, floors of a low rectangle, maybe 400' square, and that the Secretariat, considered as a machine to service conferences, could be housed in a tower-building which, for accessibility, could rise from somewhere near the center of the conference areas. Such a theoretical grouping appears at the left in Plate 6 (the first perspective to be made). The group is shown at the south (near) end of the site, for ready access from 42nd St., leaving an open plaza toward the north, with some future buildings beyond the Plaza.

During the weeks before the program was established, dozens of general ideas were submitted, considered and delineated. Plate 7 refers to a proposal for a wide and long west-east approach from the Grand Central zone to the site – a zoning law on heights of adjoining buildings – a bridging of the East River, beyond, to a U.N. residential area on Long Island – control and landscaping of both banks of the river – creation of a U.N. "lake." Thoroughly in line with U.N. moral values; would that it were with N.Y. real-estate values.

By the way, before starting any of these sketches, I wangled a free helicopter ride over the site. I had never been up in a helicopter before and when we got to a bird's-eye view-point good for sketching, it was a pleasure to ask the pilot if he would stop for a moment and to have him actually do so. From the glass egg which he and I occupied, the view was clear and stable, and when the sketch was finished, I asked the pilot to proceed and he did this, too. After this ride I more fully appreciated a suggestion made by one of the associated achitects, namely that the longitudinal axis of the U.N. plot-plan should perhaps not conform to the city street-grid but (some 20 degrees off) to the fine, natural view down the river (Plate 8).

One suggestion which came up frequently might be called the "cloister scheme"; architectural masses would rise around the perimeter of the site as to north, west and south sides, enclosing a plaza which, while open to the river (to the east) would be cloistered from the city. Plate 9 views such an arrangement from the city side. From a point farther along the avenue there would be access to the plaza (Plate 10), and, once inside the plaza, the view would be open over the river (Plate 11).

On the other hand, consideration was given to many "open" schemes in which all buildings were quite visible and approachable from the city; obviously, there are psychological as well as architectural implications. Of many studies made along this line, three appear herewith (Plates 12, 13, 14).

When, in due course, the program was outlined and the plan jelled (see plan, page 80) the perspectives of course took a more decided turn. There were still some questions of design; and, by the way, even the most serious architectural discussions have their humorous moments and I recall one incident with great good humour.

There was a school of thought—let me call it simply "A"—which contended (as nearly as I could understand matters through the interpreters) that buildings float. They float, I believe, on *piloti*. Floating is associated with elegance.

Another "school"—call it "B"—asserted that buildings do *not* float. B. said you never saw a building floating. B. said that buildings always rest right on the ground; further, that this fact should not be monkeyed with but emphatically set forth in the design. Indeed, B. stated that A's "*piloti*" looked to him (B) like "chicken feet."

Obviously, one had to make two "renderings." In Plate 15 the foreground building is floating (as nearly as I can draw buildings floating) on *piloti*. In Plate 16 the same building (seen from another angle) presents the appearance of bearing-walls resting four-square on the ground. (Not that there are any bearing walls, really; hot or cold, the building is steel-grill construction.)

These renderings didn't solve matters; but the "gentlemen" of the press as usual, were after us every hour or so for a "final design"—and what I handed out was Plate 17. If you will examine the revealing ground-floor corners all that is revealed is – trees. I challenge anybody to tell if the building is now floating or just sitting down. The moral of this story is plain: when in doubt, plant trees.

Plates 18 and 19 are two of the more recent studies (there are of course no "final renderings" as yet) and Plate 20 shows a recent bird's-eye view of the project in relation to Manhattan, this drawing being the work of one of my best friends in New York, Mr. Chester B. Price.

Well, Gentlemen, that is as far as I can take you, at the moment, with hand-drawn black-and-white "stills." But we are about to see a movie, in full colour, of the handsome model now on exhibition in New York; and this film is accompanied by a sound-track more organized than anything I have said.

There is just one more thing I would like to get over on my own sound-track. You have all worked on Boards of Design and you know the difficulties. In this case, the Board was more numerous than any I had met before; furthermore, they spoke many languages. And yet, along with the day-to-day differences of opinion which were not only inevitable but invaluable, I have never seen so numerous a group of designers arrive at so clear-cut a conclusion with such unanimity. Was this simply because Harrison shows such tact, such restraint in argument and such unobtrusive leadership in design? Was it because the Board took team-work as well as design-work so seriously? I think there was even more to it: a spirit pervading this great job launched at this crucial time: a spirit which I will evoke by paraphrasing remarks made by Mr. Harrison not many days ago:

"Today, we face the danger of wiping out, in our time, the animal made in God's image. To me, a plumber, there is no reason why we cannot have a unified world made up of all kinds of people. To reach this Utopia will take time; meanwhile, we must use an instrument to bridge the gap. This instrument is the United Nations. Don't believe all you hear: it is working: it is doing a wonderful job: it has a great man as its leader in Secretary-General Trygve Lie. It is our only hope. And it needs the help of every man, woman and child to succeed."

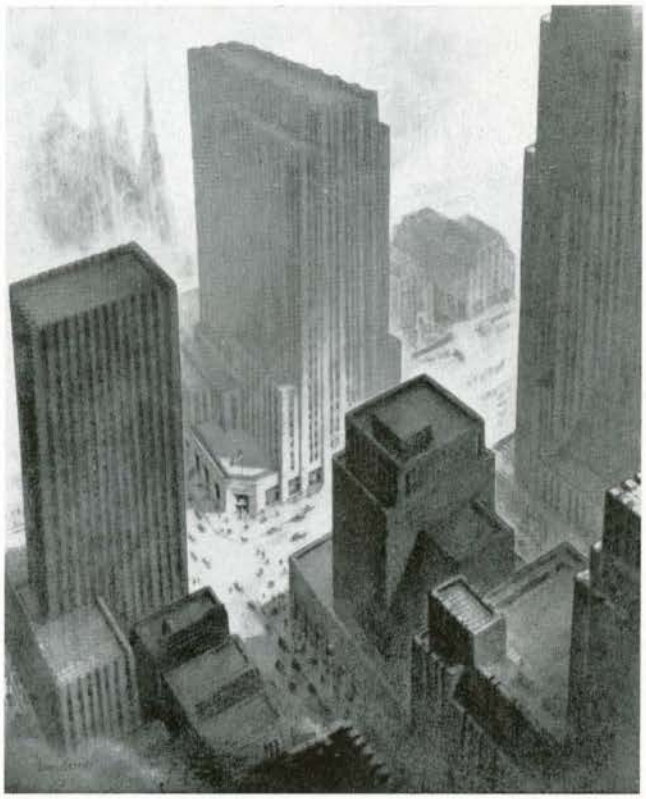


PLATE 5

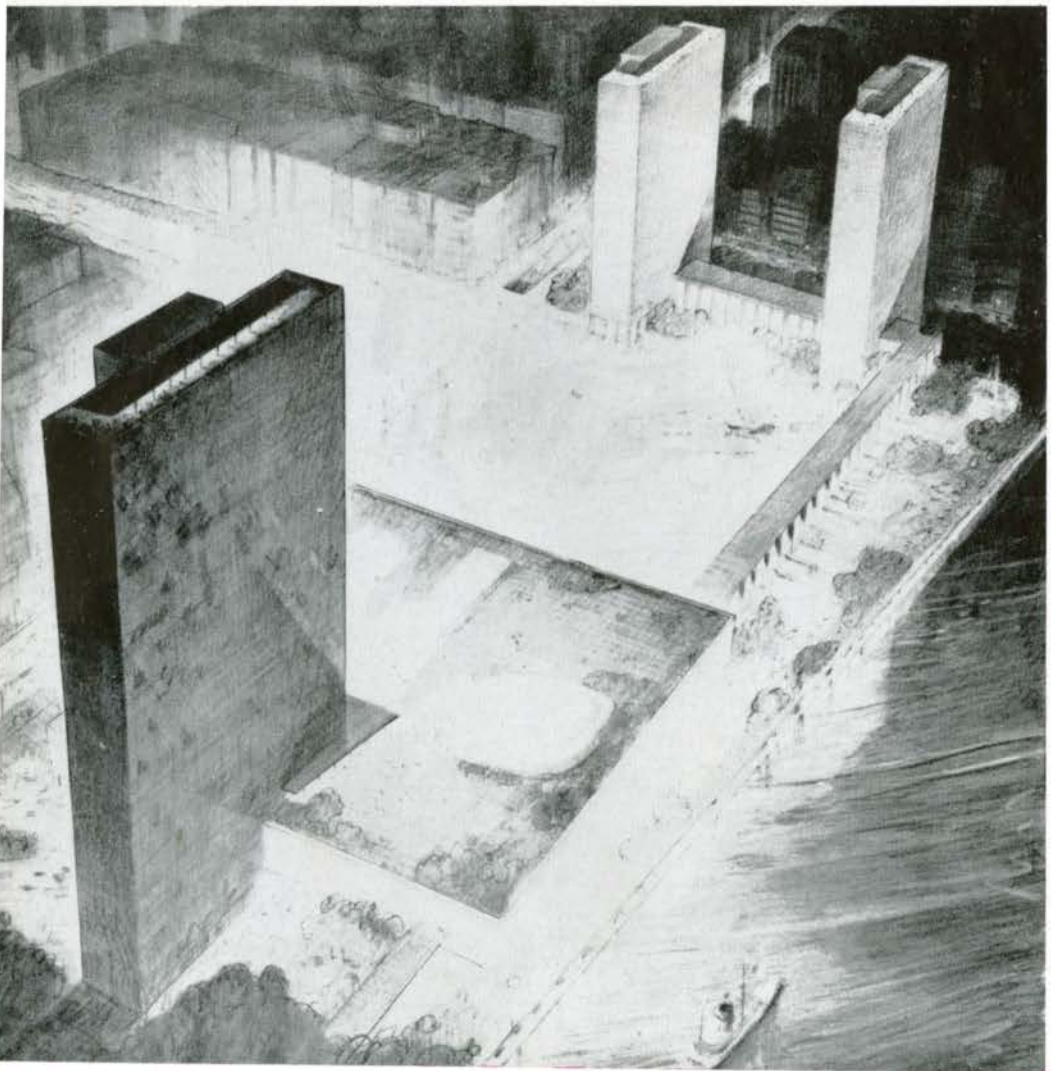
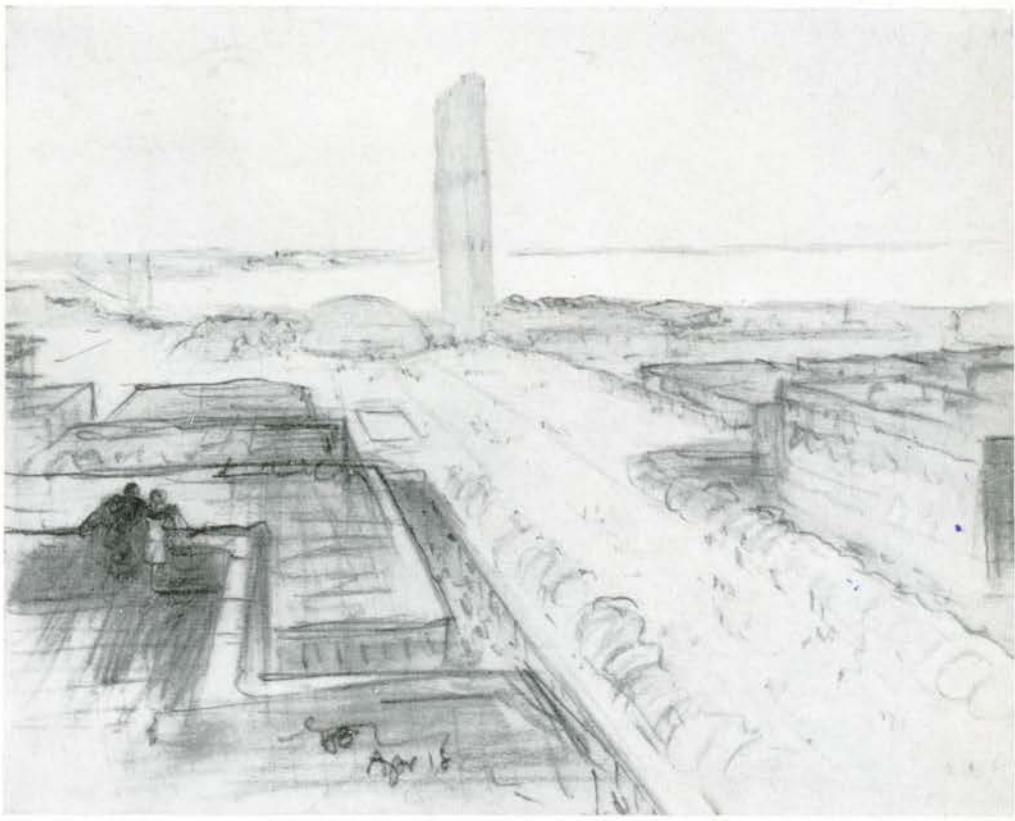


PLATE 6



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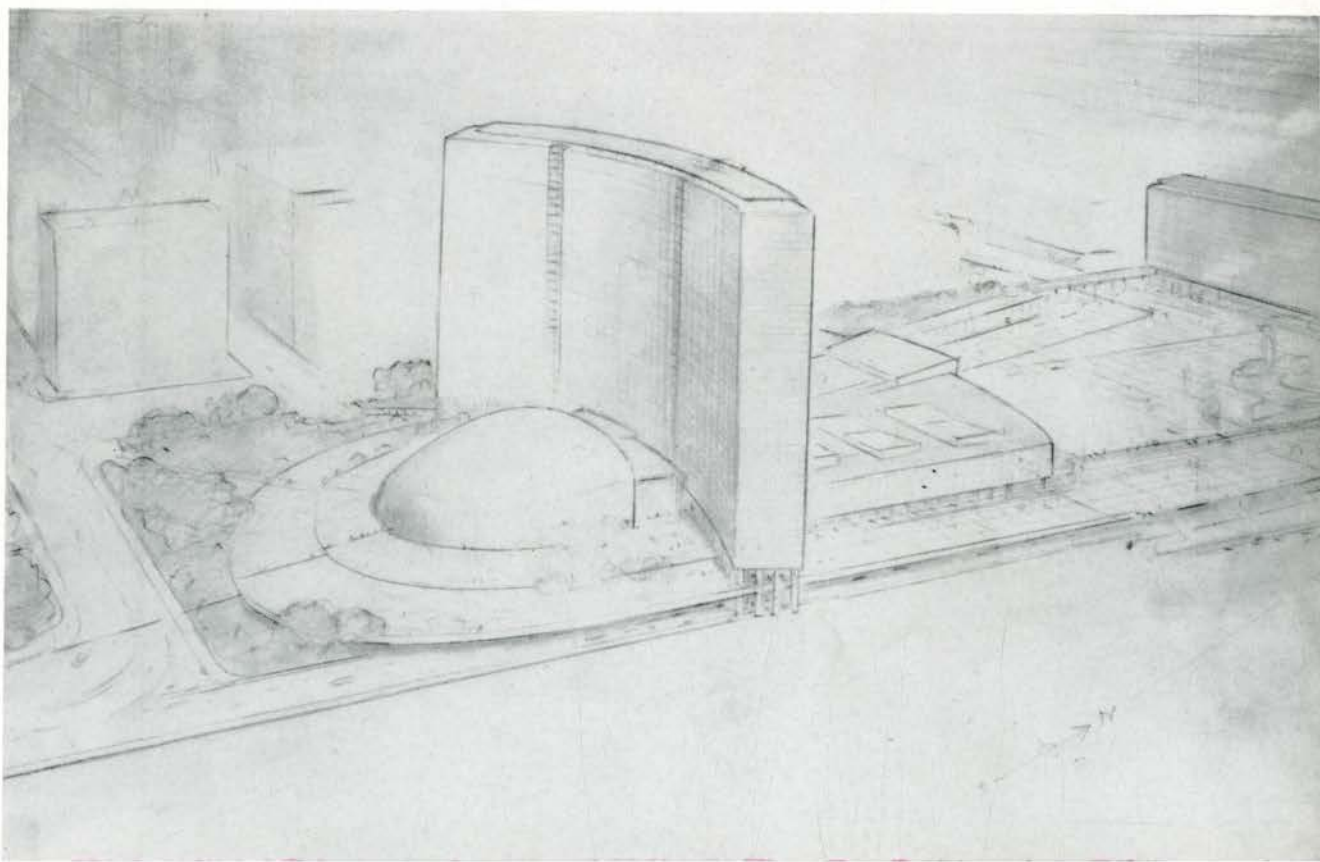
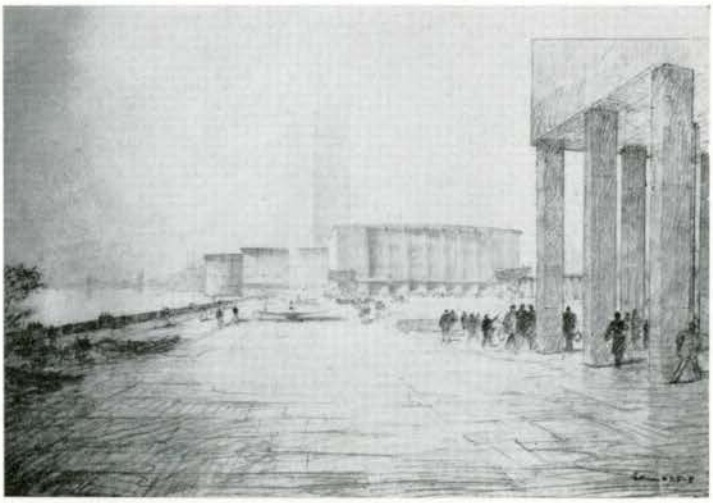


PLATE 8



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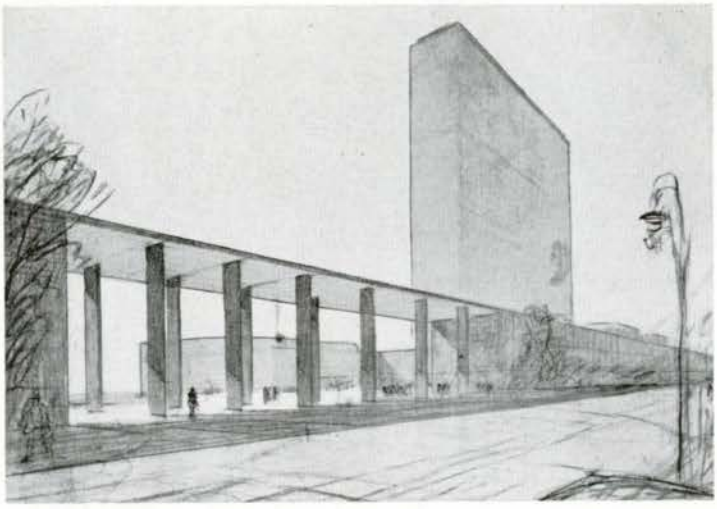
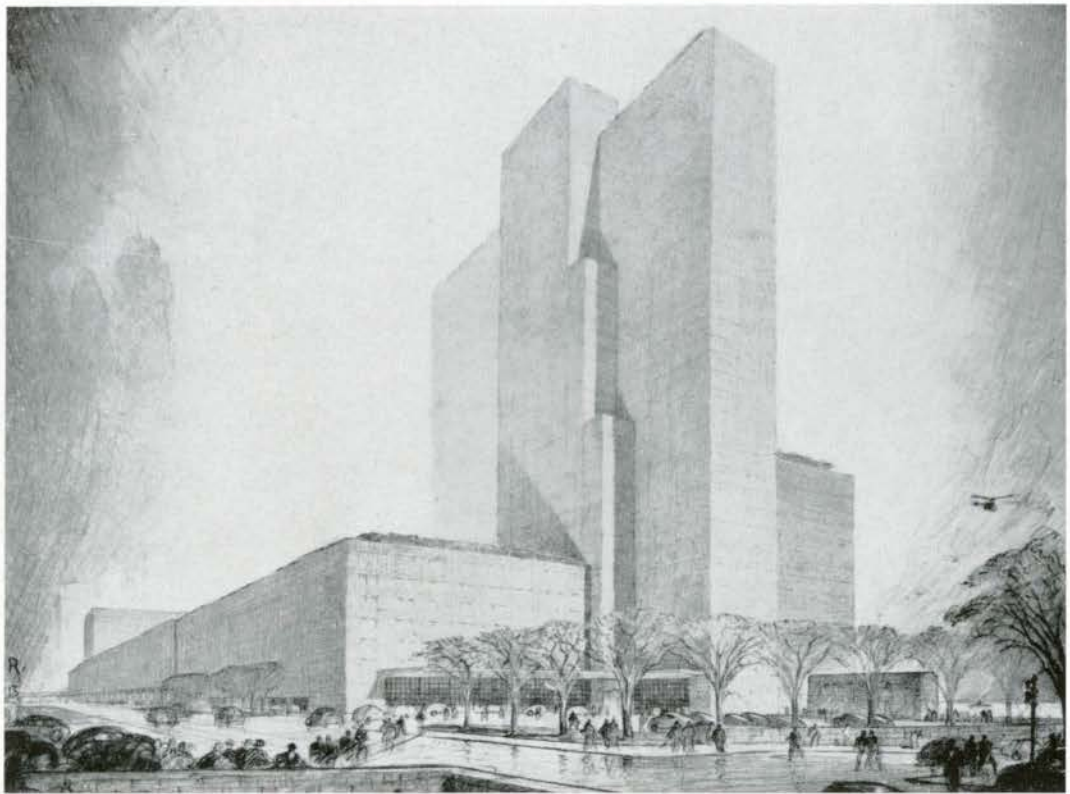


PLATE 10



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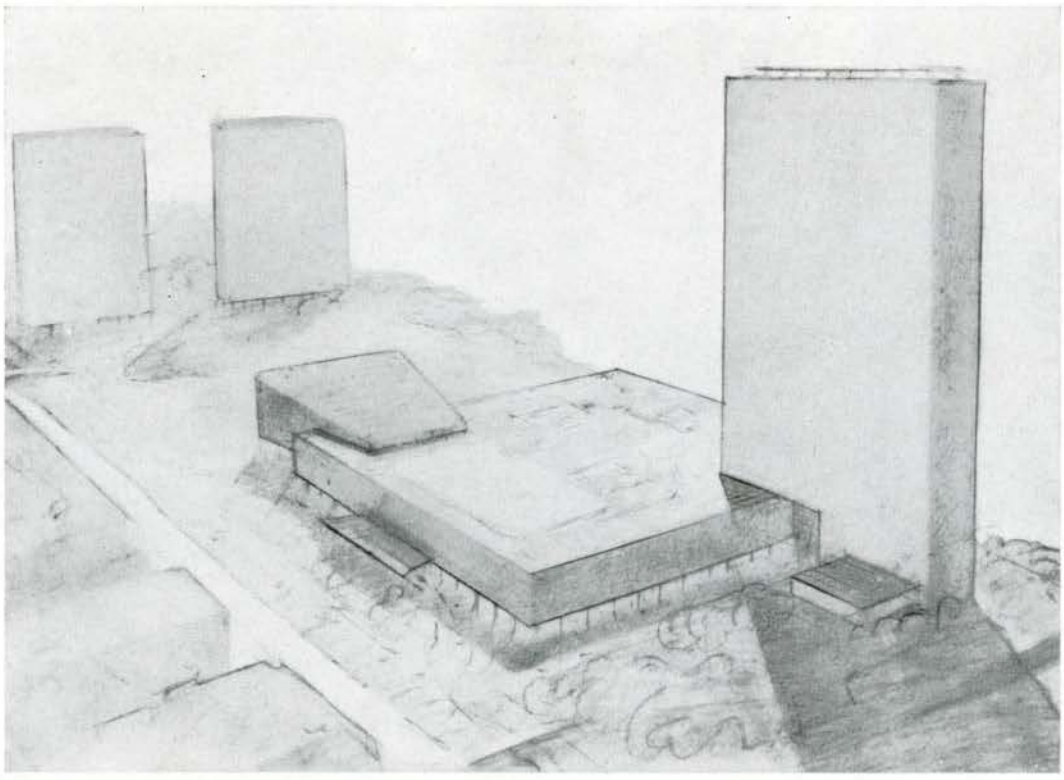

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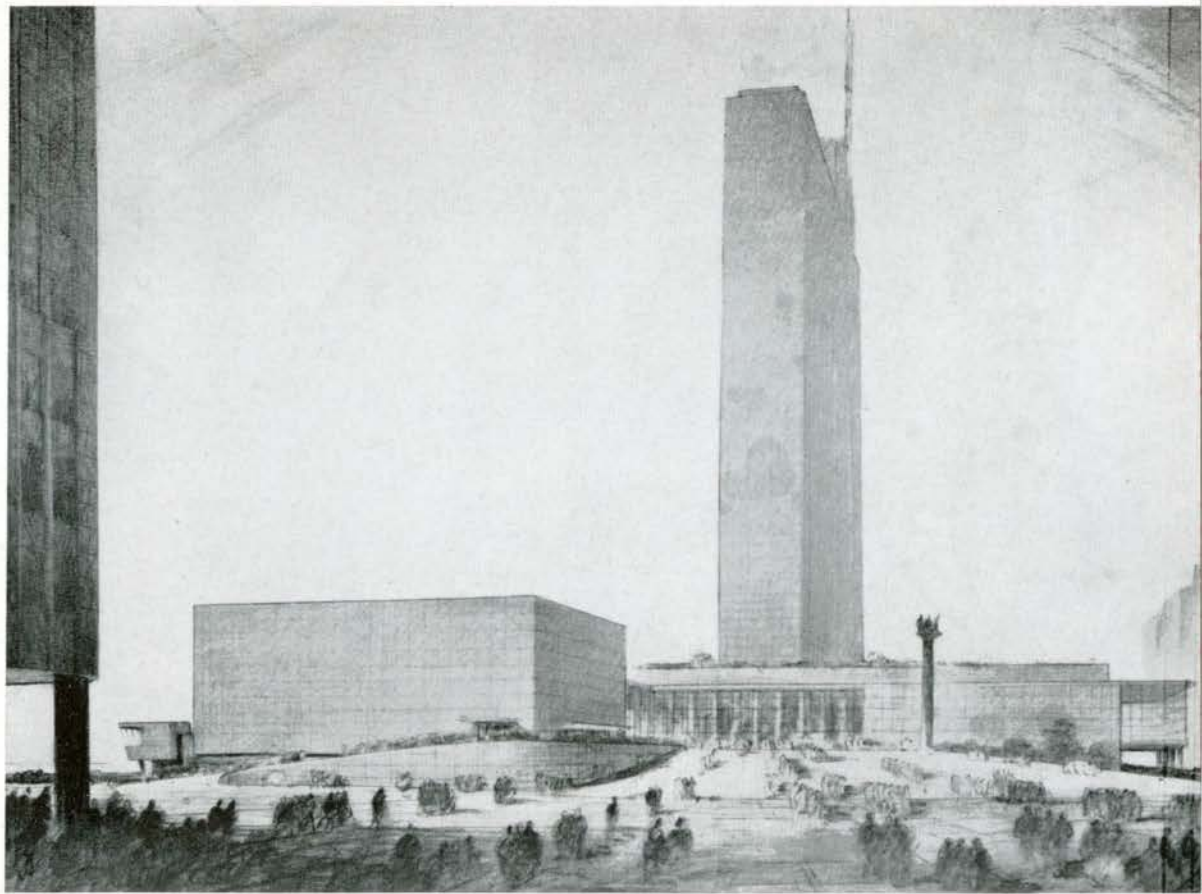

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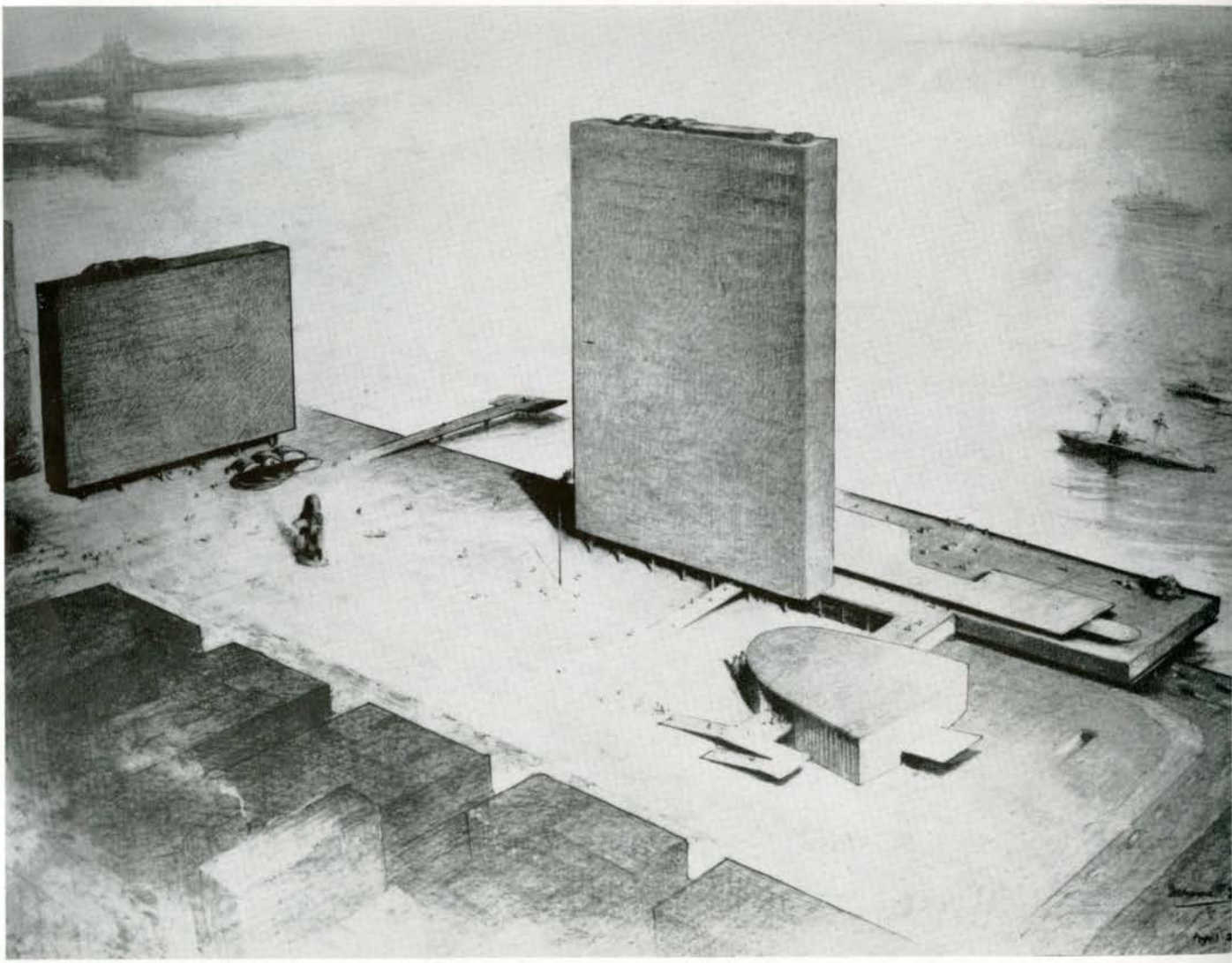


PLATE 14

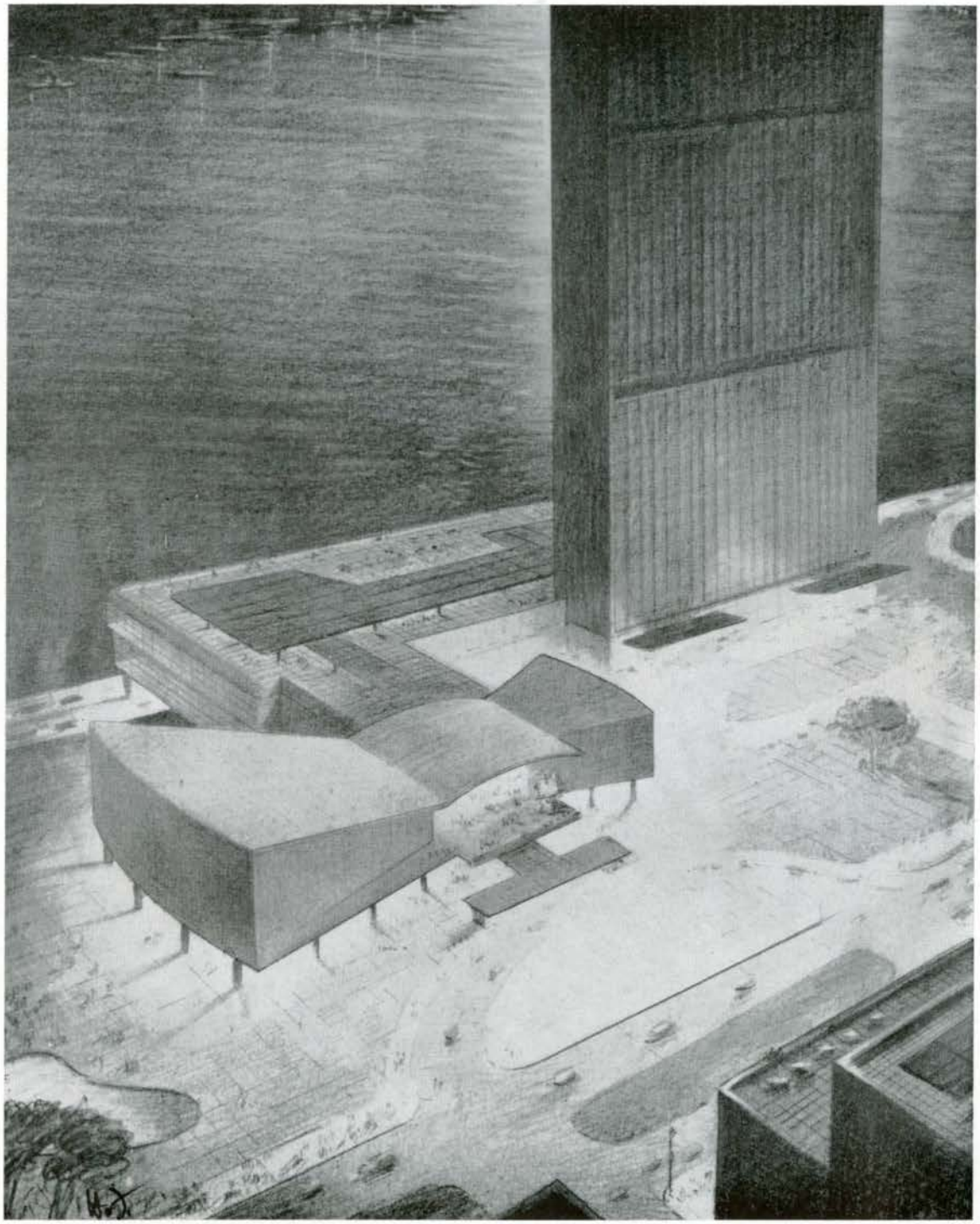
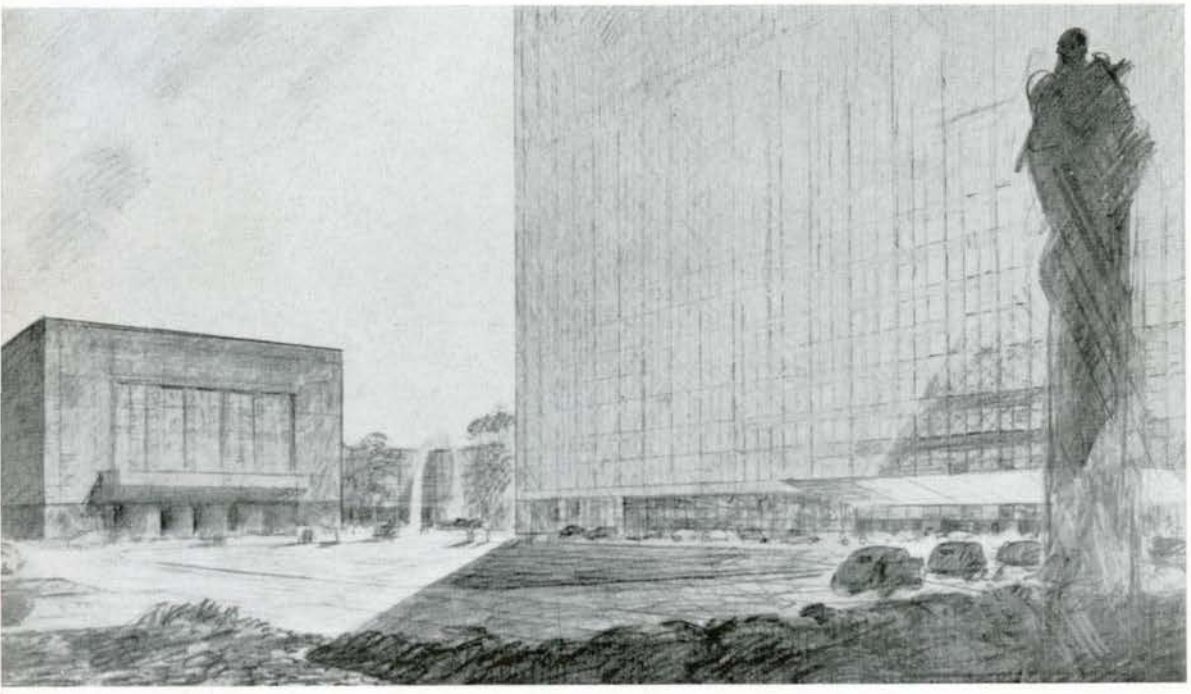


PLATE 15



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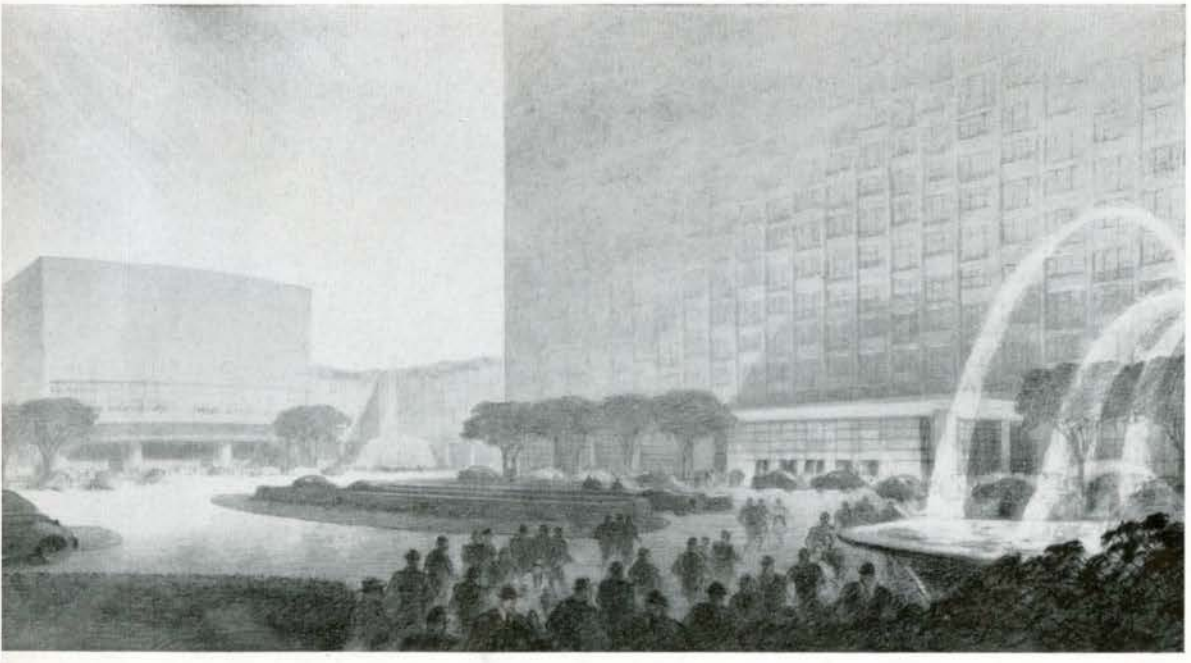


PLATE 17

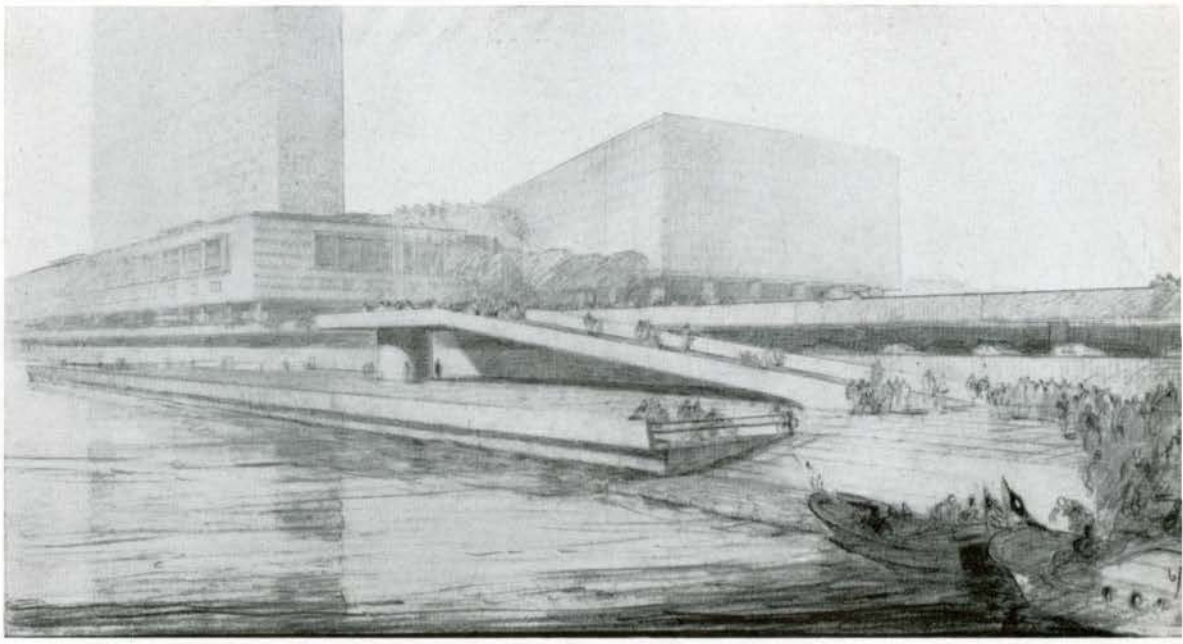


PLATE 18

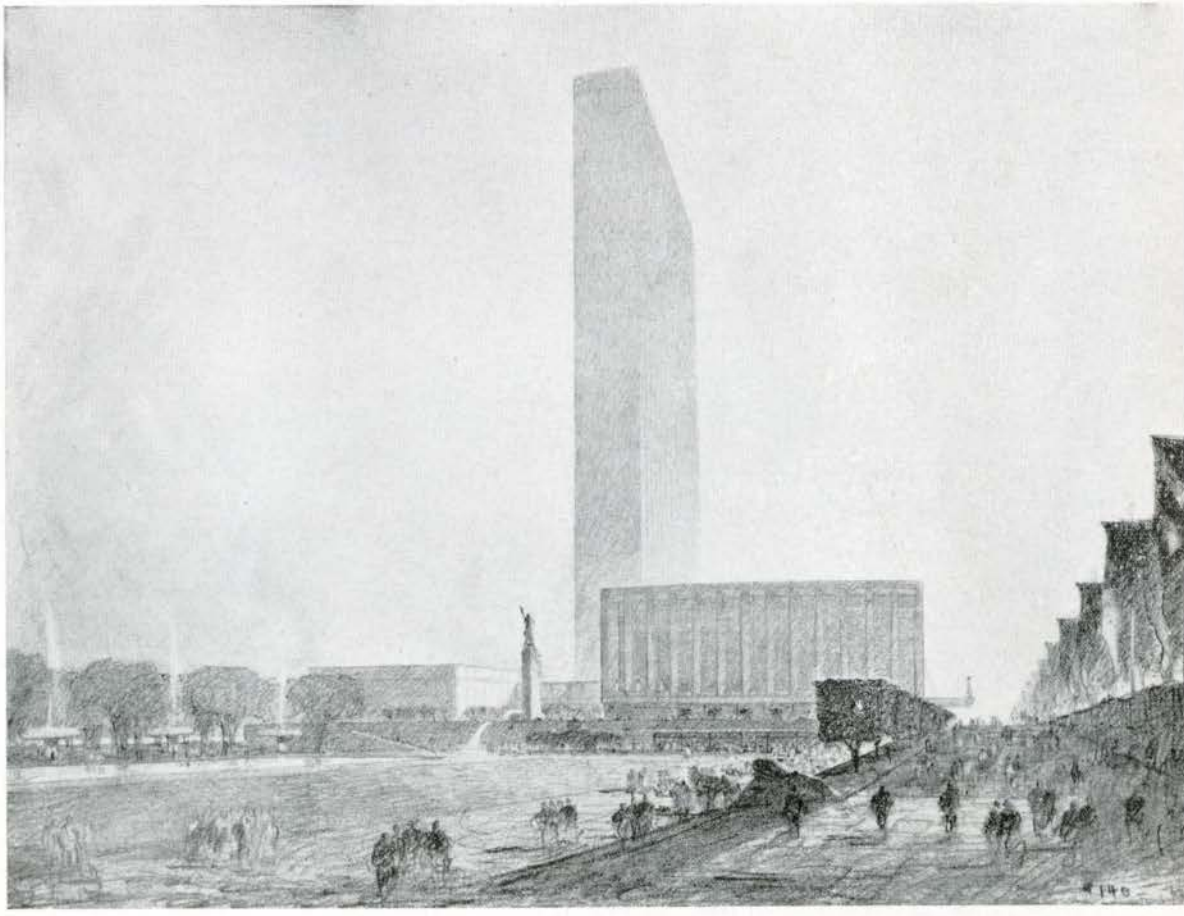
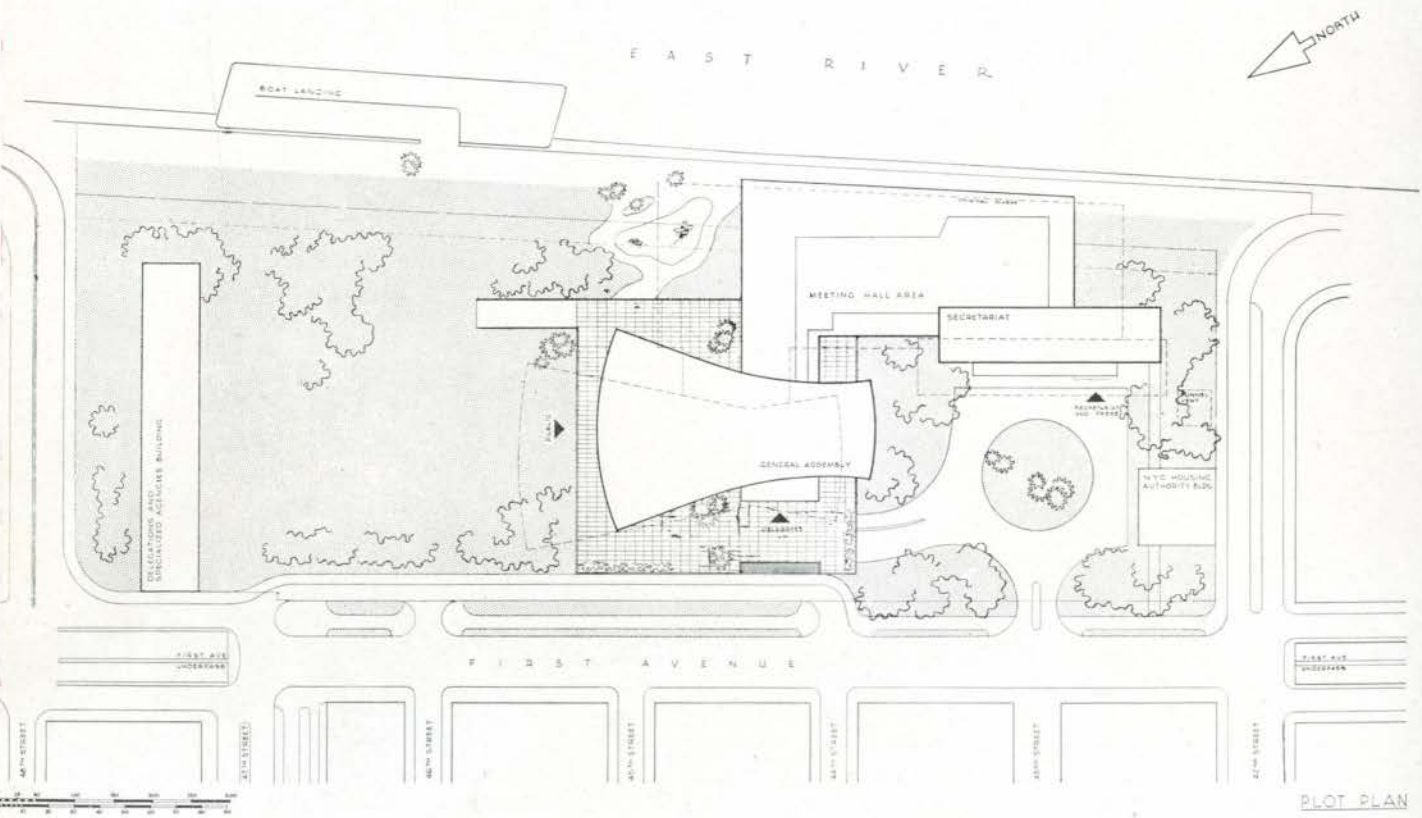


PLATE 19

PLATE 20

MR. HUGH FERRISS' DRAWINGS PHOTOGRAPHED BY DRIX DURYEA



PLOT PLAN

THE GENERAL HOSPITAL AS A COMMUNITY NEED

By JOHN C. MACKENZIE, M.D., D.P.H., *Director, Touro Infirmary, New Orleans*

An Address at the Forty-First Annual Assembly of the Royal Architectural Institute of Canada, February 24th, 1948

IN being asked to present a paper before this august body, particularly as one belonging to another profession, I am not unmindful of the high honour you have bestowed upon me in inviting me to be with you today.

Since most, if not all, architects will at some time in their careers be presented with the problem of designing a hospital, I propose to outline some of the fundamentals from the administrator's point of view that should be observed in attacking the complexities inherent to this somewhat perplexing question. That it has been a perplexing question and remained so to many an architect, is obvious from some of the results obtaining. It would appear from a number of hospitals visited and from plans examined that the requisites have not always been recognized and that more attention has been devoted to architectural beauty than an appreciation of function, which has but resulted in a monument to the architect and a tomb to those unfortunate enough to work within its contours.

It is suggested that the architect, when charged with producing a plan for a community hospital, has a two-fold responsibility. *Firstly*, to so plan the hospital that it will not only meet the present bed requirements of the community but that it will envisage the need for at least twenty-five years ahead; and in those respects that the plan be entirely flexible. *Secondly*, that the intrinsic design be based on a competent knowledge of function, traffic flow and the detail of prepositioning so that a forward progression may be maintained at all times.

The two main factors just enunciated are submitted then as the premises upon which this paper will be presented.

Adverting then to our first factor, namely: the hospital requirements of the community, both present and as predicted for the next twenty-five years, how is this to be approached? It is postulated that in outlining the steps to be taken in conducting a survey of the hospital needs for a community, whether it be rural, urban, or metropolitan, there are a plurality of factors which sort themselves into two parallel but interrelated divisions—the objective observations of the investigator and the collection of factual data. Those, when analyzed and weighed, lead to a solution of the problem presented. Each community has its own inherent characteristics that must be recognized even though the same fundamentals are common to all and the differences to be found are more of degree than diversity.

Under the first head, i.e. the objective observations of the investigator, may the "objective" be stressed. This entails that where an existing facility is present, a complete and detailed inspection should be made with special regard to layout and state of the physical plant and its equipment. Special attention should be given to individaul waste effort due to poor work flow arrangement and its inevitable concomitant duplication or unnecessary increase in staff. It is also of no small moment that a cross section of the views of the staff of the hospital be obtained by means of group conferences and conversations with individually interested parties ranging from members of the Trustees Board, the Medical Staff, the Administrative, Nursing, and Technical Staff, down to those carrying the smallest responsibilities, and that after collecting this information it should be further screened by the architect and the hospital administrator. The views and opinions of a random sampling of the citizens of the community should also be sought. This, all in an effort to build up a mosaic from which the investigator can obtain a measure of the reaction of the community towards the existing hospital, its extension or the construction of a new medical installation.

The geographic situation of the community, its relationship to other medical facilities, and the means of access and transportation to them at all seasons of the year must receive the fullest consideration. The assessing of the economic ability of the community to construct and maintain a hospital either as a municipal or private benevolent responsibility must not be lost sight of. This may dictate not only the proportion of single to multiple bedded wards but also that only part of the overall programme can be undertaken and that the remainder be left for future development. It may not be out of place at this point to direct attention to the inference that a comprehensive survey includes not alone active treatment beds but all types of beds envisaged as the community's need. This comprises provision for the convalescent, the degenerative conditions of the aged, and the specialties, i.e. the contagious,

the tubercular, and the mentally ill, etc. Whilst every care must be exercised to avoid duplication or overlapping this may, in certain instances, be difficult of achievement due to the presence of sectional prides, prejudices, or jealousies for individual autonomies. Be that as it may, one most significant issue is that beds be provided in ample quantity for the care of the convalescent, the chronic, and the mentally ill, so that such complementary accommodation will allow of the expensive installations requisite for an active treatment hospital being used to their fullest efficiency and economic return. Whilst it is not the practice for general hospitals to admit either the tuberculosis or mentally disturbed case, it must be realized that such will be unavoidable on occasion, and so provision for the short term case awaiting placement must be included.

It is, however, upon the collection of factual data that the hospital bed needs will be determined and this will be based upon an analysis of available vital statistics, and population trends. Even at the risk of it being considered as outside the field of the architect to collect and tabulate such data, some of the means and methods adopted for this purpose will be discussed if for no other reason than to focus attention on it. *By the weighing and evaluating of three factors, i.e. the death rate, the birth rate, and the population trend,* as shown by a study of the decennial figures over a period of time, the investigator will be in a position to present factual data from which can be reckoned with some degree of near accuracy the future hospital needs. For example, if the population trend is downward, then obviously the bed requirement must be set from that viewpoint, or, if the population pyramid shows a rapidly aging population, then provision must be made for beds to care for the degenerative conditions of the aged.

Life expectancy and fertility must, to some extent, also govern our concept as to types of beds required. In 1800 the average expectation of life at birth was thirty-five years and the average woman of childbearing age had eight children. By 1944 the life expectancy had risen to sixty-five years and the average woman bore 2.2 children instead of 8. Furthermore the crude death rate dropped from 25/1,000 in 1830 to around 10/1,000 in 1944 (this will most probably rise with our aging population) and the birth rate from 55/1,000 to 20/1,000. The most spectacular change, however, has been the drop in infant mortality, i.e. infants under one year of age, which has fallen from an approximate rate of 200/1,000 live births to around 35/1,000 in fifty years' time. Whilst such studies are more for the demographer, mention must be made of their importance as population structures and trends cannot be ignored in the surveying and estimation of hospital bed requirements.

Then again, if the indications are that, due to the extensive adoption of protective inoculations, the incidence of the exanthematic is rapidly being decreased, then beds now used for such cases will become available for other purposes. Those and a myriad of other factors will be revealed by a close examination of the data described.

Collin's and his co-workers in the U.S.P.H.S. by their studies clearly demonstrated that mortality and morbidity rates per se for disease entity bear no relationship to each other and this can be illustrated by taking a few examples from his studies on Duration of Illness from Specific Diseases among 9,000 families based on nation-wide periodic canvasses, 1928-31. Public Health Reports Vol. 55, No. 20, Page 861, May 17, 1940.

ANNUAL CASE RATE AND DEATH RATE PER 1,000—INCIDENCE OF MORTALITY TAKEN FROM THE REGISTRATION STATES, 1929-30, AND INCIDENCE OF DISEASE, 1928-31

Cause	Annual Case Rate per 1,000	Annual Death Rate per 100,000	Annual Death Rate per 1,000
Respiratory	328.5	184.3	1.843
Digestive	86.0	77.1	.771
Communicable	71.4	46.7	.467
Circulatory	26.9	239.2	2.392
Kidney	15.3	90.8	.908

However, mortality and morbidity can be co-related and this has been demonstrated by the findings of the Commission on Hospital Care. It has shown that, on an examination of "hospital and vital statistics for the country as a whole (U.S.A.) the public uses about 250 days of general hospital care for each death and co-related sickness in a general hospital." This finding is expressed as a bed-death ratio by dividing the 250 days' care by 365 days, giving 0.685 or approximately 0.7. In other words this indicates that for every hospital death, 7/10ths of a bed is used per year. This then presents a means for estimating the need for hospital beds by multiplying the number of deaths expected per 1,000 by 0.7. Inasmuch as it is considered that approximately 50% of all deaths occur in general hospitals, the bed requirement can be arrived at by taking 50% of the community death rate and multiplying it by the factor 0.7. For example, taking the crude death rate of Canada for 1943, which was 10.1 per thousand, and applying the formula to 50% of this rate, a result of approximately 3.5 beds per thousand population is obtained. This would have to be considered as at 100% occupancy but since it is common practice to reckon the hospital as operating at full capacity when an average occupancy of 75 to 80% is reached, the figure of 3.5 beds per thousand would have to be increased by approximately one-third in order to provide the customary 25% cushion, thus giving the requirement of 4.6 beds per thousand. Incidentally the beds per thousand population for Canada as a whole in 1944 were 4.5 but certain Provinces are not adequately provided for, as will be seen from the following table:

BED CAPACITY ONLY OF CANADIAN PUBLIC HOSPITALS IN RELATION TO POPULATION, 1937-1944

	1937			1944		
	No. of Hospitals	Bed Capacity	Beds Per M.	No. of Hosp.	Bed Cap.	Beds Per M.
Canada	575	43,850	4.4	593	48,825	4.5
Prince Edward Island	4	238	2.8	4	240	2.9
Nova Scotia	27	1,621	3.3	33	2,280	4.2
New Brunswick	18	1,271	3.3	19	1,459	3.6
Quebec	77	11,423	4.1	84	13,501	4.4
Ontario	161	13,756	4.1	156	14,591	4.0
Manitoba	40	3,402	5.2	42	3,594	5.4
Saskatchewan	87	3,363	4.0	87	3,419	4.4
Alberta	88	4,880	5.5	92	4,609	6.2
British Columbia	73	4,890	6.9	77	5,132	6.0

Source: Institutional Statistics Branch, Dominion Bureau of Statistics.

In arriving at the bed requirement, the question of bed turnover must always receive our attention for where it can be maintained at a high ratio due to shortened average hospital stay then a lesser number of active treatment beds will be indicated.

Adverting to the bed-death ratio as formulated by the Commission on Hospital Care it is of interest to note that on figures provided through the courtesy of the Dominion Bureau of Statistics at Ottawa the bed-death ratio for metropolitan areas in Canada differs but little from those prevailing in the U.S.A.:

BED-DEATH RATIO FOR METROPOLITAN AREAS IN CANADA

Metropolitan Area	No. of Beds	No. of Deaths	Metropolitan Population	No. Deaths Per Bed	Beds per M. Population
Halifax	917	470	122,565	0.5	6.6
St. John	650	375	51,741	0.5	12.5
Montreal	6,915	3,913	1,116,800	0.5	6.05
Toronto	4,964	3,504	667,457	0.7	7.28
Winnipeg	1,951	1,319	252,758	0.6	7.73
Regina	955	549	58,245	0.5	16.39
Edmonton	1,468	784	143,264	0.5	10.24
Vancouver	2,434	2,127	416,416	0.8	17.85

COMPARISON OF GENERAL HOSPITAL FACILITIES IN TWELVE LARGE CITIES IN U.S.A.—BASED ON 1940 POPULATION

City	Number of Beds	Beds per 1,000 Population	Beds per M. Population in Metropolitan Areas
Boston	6,039	7.8	6.8
New York	33,176	4.4	4.4
Philadelphia	11,519	6.0	5.9
Baltimore	4,155	4.8	4.8
Washington, D.C.	2,246	3.4	3.4
Pittsburgh	4,596	6.8	6.8
Cleveland	4,596	5.2	4.6
Detroit	5,501	3.4	3.4
Chicago	13,939	4.1	4.1
St. Louis	5,258	6.4	6.4
San Francisco	4,865	7.7	6.1
Los Angeles	6,380	4.2	4.2

Source: Hospital Service in the U.S., 1946, American Medical Assn.

It would seem appropriate to consider the bed-death ratio a valid means of arriving at the bed requirement for any community providing our aging population with its inevitable effect on increasing mortality rates be taken into consideration, hence it is suggested that the components of this formula, due to this eventuality, will have to be reviewed from time to time in order to retain the proper relationship between general hospital days care accorded and the hospital death rate.

On the other hand the yardstick postulated by the Duke Endowment of Durham, North Carolina, was that for every 1,000 population five active treatment beds were required and this has been common practice for some time. It is, therefore, of interest to note that though this requirement was made several years ago, it parallels the figure obtained by applying the bed-death ratio formula. The Duke Endowment further premised that for contagious diseases 0.5 beds per thousand are required with a similar requirement for pediatrics and for obstetrics 0.45 beds per thousand. In regard to the latter, the Commission on Hospital Care point out that, based on an average stay of eleven days for maternity cases, four beds at 75% occupancy would be required for every 100 births per year but since, as the Commission on Hospital Care further point out, "births in the community are reflected in the total death rate, it may not be necessary to introduce births into the formula where there is close agreement between mortality rates for newborns and adults.

In regard to the complementary bed requirement for the specialties it is again emphasized that they must be provided if the active treatment beds are to be truly effective. For the treatment of those suffering from tuberculosis the National Tuberculosis Association recommends that three beds be provided for every death attributed to tuberculosis, whilst for chronic diseases the Committee on Administration of the American Public Health Association recommends that two beds per thousand are required and for convalescent care 0.75 beds per thousand. Respecting mental beds the Technical Committee on Medical Care recommends 5.6 beds per thousand. These, then, may be considered the component elements influencing the content and extent of the initial survey.

It will be appreciated that for active general treatment care the average bed requirement lays somewhere between 4.5 to 6.5 beds per 1,000 population. In the larger metropolitan areas, due to the congregation of specialties, medical schools, and technical facilities, there will be a larger proportion of hospital beds per thousand population required due to the referral from outside areas of the more serious cases to those centres. On the other hand, whilst the requirement for the rural community may be at the lower end of the bracket, this does not necessarily follow because due to dispersion of populations a greater number of smaller hospitals will be required to serve those areas. Such rural hospitals should be considered more in the light of health centres with a limited number of beds for the care of surgical emergencies and non-complicated maternity cases. Otherwise all cases requiring hospital investigation and the skill of specialists should be referred to the nearest large hospital capable of offering the professional, technical, and physical facilities

requisite for the treatment of the condition from which the patient is suffering.

The survey having been proceeded with along the lines indicated by means of the formula suggested and the weighing of the various factors mentioned, direction can be provided the community as to the number of beds of the varying categories that are the indicated requirement. If the number of beds be relatively small, then it is suggested that steps be taken towards associating the hospital with the largest hospital nearest to it insofar as laboratory and specialized techniques are concerned, to save on expensive space and equipment. This, it is felt, can be done without loss of autonomy or civic pride and permit of the community hospital having the advantage of an exchange of views and technical help with possibly even a more extensive exchange of staff. This will all redound to the efficiency and standing of the smaller institution.

Up to this point we have dealt with a means of arriving at the present potential needs of the community under survey, but inasmuch as it is contended that to stop there is a grave error in drawing up the master plan to take care of the bed requirement for the succeeding twenty-five years, the question arises how is that to be predicted? This estimate can be arrived at by referring to such statistical studies as are provided in Bulletin F-4 as issued by the Dominion Bureau of Statistics and entitled "The Future Population of Canada." In this will be found the estimated population for each Province of Canada twenty-five years hence. By applying the percentage increase in population given for any locality to the present bed estimate arrived at for that locality, (since it has been arrived at on a morbidity death rate per 1,000 population factor), then a valid estimate of future hospital bed requirement can be obtained.

Having arrived at an estimate of present and future bed requirements, the second premise on which this paper is presented now comes up for consideration and this is, what are the inherent requirements per se of the hospital to be constructed? In this regard it must be borne in mind that as the patient is to the doctor—an individual entity—so is the community's hospital to the architect. No stereotyped plan can be laid down, and what will follow is but some views and suggestions as to how, in general, the active treatment hospital may be laid out. In this connection attention is directed to the vast amount of research and study put into hospital design by the Hospital Division of U.S.P.H.S.

Obviously the first requirement to be considered is the selecting of a suitable site. The stating of it before this body may well seem superfluous, but it is mentioned because on occasion it would seem that neither the architect has been "pressured" or has not exercised as much foresight as he might have.

Its size will depend not alone in regard to the number of beds presently envisaged but should also allow for future increases that may have to be met. The site should be centrally located and easy of access at all seasons of the year but, equally, it should be removed from such noise provoking locations as street car intersections, bus terminals, parking lots, schools, public playgrounds, busy railroad freight and assembling yards, slaughter houses from which a shift of wind provides the full benefit of its effluvia, noisy industries, etc. In a word, it should be such that it is remote from all extraneous annoyances either visual, auditory, olefactory, or any other that may tend to upset the emotional equilibrium of the patient. It should, however, be convenient of approach for the ambulant patient, the visitor, or staff member. In these days of good roads, rapid and plentiful transportation, the problem of reaching the hospital is not so great as to outweigh the advantages to be gained by the amenities provided through a commanding and dignified position protected by sufficient grounds so as to insure quietness and beauty of outlook not only for the present contemplated building but for any future extension. A site adjacent to a public park or botanical garden will be a further insurance of protection from future encroaching buildings.

The availability of all public services such as water, sewage, gas, and electricity is of some moment because of the expense involved in providing these services should they require to be led in from any distance.

The site should permit of the ready orientation of the building so that all parts of the patients' accommodation will obtain the greatest amount of daily sunlight as determined by the summer and winter solstices. This, in the north temperate zone, directs that the patients' accommodation will face south, south-east, or south-west.

The basic thought in the planning of the hospital is that all endeavour will flow in a smooth forward motion. This involves the integrating of all departments in such a manner that there will be a minimum of backtracking and criss-crossing on the part of patients and staff alike. The orderly flow of traffic and individual work effort must, therefore, be fully realized and towards this end the importance of frequent conferences with those who will be permanently charged with operating the hospital and its departments cannot be overemphasized. It should, however, be cautioned that there are always some individuals who will want more than they actually require. A further purpose of those conferences will be to appreciate how departments are related to each other and how, by prepositioning equipment and supplies, the greatest economy of effort and space can be obtained.

In this connection certain recommended standards have been set up which are valuable guides but which, of course, have to be adjusted to meet local conditions. For example, the United States Public Health Services recommend that, on a square footage per bed basis, the requirement for a fifty bed hospital is of the order of

623 square feet; for a 100 bed hospital, 532.4 square feet; for a 150 bed hospital, 507 square feet; and for a 200 bed hospital 501.6 square feet. These areas are, in turn, distributed over the various departments in like manner. It is suggested, however, that the breakdown of space is affected by so many factors, particularly as it applies to patients' accommodation, that many considerations have to be weighed in the light of local requirements and as they are affected by geographical situation; some of these might be:

How far is it to the nearest medical centre?

Can supplies be obtained on a day to day basis?

What is the availability of medical specialists?

What proportion of the population, due to their economic situation, will seek private, semi-private or public ward accommodation?

These and many other broad questions will have a direct bearing on the space distribution.

The growing adoption, by the public, of prepaid hospitalization plans has increased the demand for semi-private accommodation which has also flowed over into a demand for private rooms. This in turn has resulted in a lesser demand for ward accommodation. The question of having all patient accommodation so elastic that it can easily be converted from one type to the other therefore becomes a very live issue, particularly as it is not without the realms of possibility that with a recession of business or continued increasing costs, the present trend may quite easily shift. The resultant demand for more public and semi-private accommodation than is presently the vogue would be inevitable. The suggestion is, therefore, made that consideration should be given to the wider use of the prefabricated partition such as is used in office and industrial buildings so as to allow of quick and easy conversion from one type of accommodation to another; and the further important factor that with the cost of medical care continuously on the increase, well planned, cheap construction becomes an ever evident must. A fact which, it is emphasized, presents a real challenge to the architect.

The actual number of private, semi-private, and public wards, as previously noted, can only be estimated on local demands though the trend at the moment is to provide one-third of the total bed capacity for each. There is a growing tendency, however, towards the providing of a larger proportion of private rooms at the expense of the two bedded room which has always been a most vexing type of accommodation. It would seem that the only solution to meet this situation would be to reduce the dimensions of the private room to the barest and most economical minimum. This may even require that existing standards as set up by law may have to be reviewed. It is quite possible that those standards were based on the previously held concept, now considered obsolete, that a concentration of 0.08 to 0.25 per cent. CO_2 in the air was injurious to health and that the normal content of CO_2 in the atmosphere of 0.03 per cent. should be maintained at all times.

Since, according to Boyd,* "the idea that more frequent changes of the air than three times per hour will produce objectionable drafts" this, then, accounts for a standard of 1,200 cubic feet per patient being set up and presumably it is worked out in this wise:

1. To maintain the normal content of air at all times, the patient requires from 33 to 60 cubic feet of air (dependent upon illness) per minute.
2. The hourly requirement then would be 2,180 to 3,600 cubic feet per hour.
3. Changes of air per hour—3.
4. Therefore cubic capacity of space would be 726 to 1,200 cubic feet.

Incidentally, the British War Office up to shortly after the commencement of the last war, laid down 1,200 cubic feet with 100 square feet floor space and a ceiling height of 12 feet for Home Station Hospitals (vide Regulations for the Medical Services of the Army, 1938).

Actually, in to-day's thinking, it is the square footage per patient bed that is the important factor and this in an effort to minimize to the greatest extent possible the risk of droplet infection. That is one reason why cubicles for children are now considered a necessity and also why, in larger public wards for adults, the dwarf partition, with or without screens, is now being so widely used.

It is suggested that this whole matter then resolves itself into an engineering problem and that by more frequent changes of air so engineered as not to cause draught annoyance, then the cubic capacity per patient could be markedly reduced.

The advantage of single rooms is their flexibility; it allows of the segregation of age, sex, race, and disease entity and this to some extent permits of more effective use of space as where multiple bedded wards are in the majority and they, in turn, are distributed according to age, sex, and disease entity, it not infrequently happens that at times they are only partially occupied.

Regardless of the ratio decided upon for private, semi-private, and multiple bedded wards, may it be repeated that elasticity of patient accommodation, in keeping with local experience, is a main consideration. Notwithstanding the type of ward unit concerned there are certain desirable features which should be before one in an effort to make the work of the nurse and other ward personnel just that much lighter and which will reflect itself on the patient care. In the first place it is considered that a ward unit should consist of between twenty-five to thirty-five beds, the former for single rooms, the latter for semi-private or multiple bedded wards. The determining factor, however, will be the distance from the ward ancillary rooms to the furthest bed which, taking the nurses' station as the pivotal

*"Preventative Medicine," Mark F. Boyd, M.D., M.S., C.P.H., Seventh Edition.

point, should not be more than eighty feet. Grouped around the nurses' station with medicine and supply cupboards, will be the utility room which should be divided into a clean and dirty side, clean and dirty linen rooms, ward kitchen, spare ward equipment room, flower room, treatment room, consultation room, special nurses' room, visitors' waiting room, telephone booths, patients' washrooms, toilet facilities for each sex, bedpan rooms and cleaner's closet. To save space the supply and linen cupboards need not be "walk in" but open off the main corridor and the storage shelves should not be more than eighteen inches deep, otherwise they are too difficult to reach back into and they become wasteful. Stretcher and wheel chair alcoves can be recessed off the main corridor. All of these ancillary facilities may occupy as much as forty per cent. of the total floor space but this will depend on the manner in which they are planned. They will, in the main, be located on the north side of the building with the exception of the solarium which, if included, may occupy an end of each floor.

In the multi-bedded wards a lateral distance of at least three feet should be allowed between the sides of beds and between foot ends of beds at least six feet. This would mean that for a four bedded room a minimum space of 15'0" x 19'0" would be required though in order to give space for patients' clothes lockers, this should be increased to 16'6" x 20'6", approximately.

Each bed should be readily screened from its fellow by means of pull curtains installed on suitable hardware. A rod pull screen may similarily be installed on the frame of all ward doors so that the patient may be shielded from the gaze of those passing along the corridors when the door is open.

Since the risk of droplet and cross infection is so real, e.g. an explosive cough will carry nine feet, it is well to keep adjacent beds as far apart as possible and where minimum dimensions are given, this contingency must be borne in mind.

Each ward should have a wash hand basin for the convenience of the medical attendant before and after patient examination as well as for the use of the patient.

There should also be provided on each multiple bedded ward unit at least one single bedded ward complete with its own toilet and bathroom facilities so that, on occasion, it can be used for isolation purposes. Furthermore, if this suite in addition is adequately soundproofed and has indestructible light fixtures, etc., it can readily be converted by the installation of a sturdy metal window screen for the occasional short term stay psychiatric patient. In this regard, however, it may be considered desirable to set aside one room with wash room facilities that has been especially planned for this purpose, but since in the majority of instances it will be used for non-psychiatric patients the room should not obviously differ from the standard type of private ward.

Aside from the space allotted for patients' accommodation another broad division of the hospital accommodation is that allocated to the major ancillary professional departments. Under this head come the operating room suite, the obstetrical suite, both of which should be located in a separate wing or at the end of a floor so that no traffic can pass through them. Other adjunct departments are pathology, radiology, physiotherapy, occupational therapy, and the pharmacy. As the obstetrical suite comprises labour rooms which should be in the relationship of two labour rooms per delivery room, so it is considered equally essential that the operating room suite comprises recovery rooms. The advantage of such is a definite saving of staff as one nurse in the operating room can look after several immediate post-operative cases which, if sent back to their respective wards, would each call for the services of a nurse. It also permits of a more immediate contact in the case of emergency with the anaesthetist or surgeon who may still be in the operating room suite and equally allows for the concentrating of resuscitation equipment.

The minimum requirement for the operating room suite should be a major and a minor operating room with scrub up and sub-sterilizing rooms in between, for each fifty beds, together with anaesthetic, cystoscopic and fracture rooms, but as with all other requirements, local conditions will be the guide. As regards size of operating rooms, recommendations vary tremendously but a good average size would be of the order of 16'0" x 18'0". In fact, no difficulty has been met with operating rooms of 16'0" x 16'0".

If possible the whole suite should be air conditioned and if not, the operating rooms should at least be provided with humidity and thermostatic heat control as well as explosion proof electrical switches and outlets with copper grounded floors to guard against and drain off static electrical build up. If viewing galleries are to be provided, they should be completely separated from the operating room by means of solid partitions and large viewing windows. Conversation from the operating room to the observation booth can be maintained by means of a public address system.

The nurses' work room and central sterilizing equipment may or may not serve the whole hospital, dependent on its size. In this suite all surgical supplies will be prepared, sterilized and stored, and in the smaller hospital lay-out, should be located immediately within the surgical operating room suite. It is of advantage for the distribution of supplies to have this room connected to all floors of the hospital by a dumb waiter. Nurses' and doctors' changing rooms, showers, and toilets, should also be provided, besides anaesthetic room, a cleaner's closet and ample storage cupboards for plaster, splints, linen, and other supplies as also a clean-up room and cupboard for soiled linen. In the larger hospitals there should also be provided a room for the pathologist where frozen section or rush diagnosis can be conducted, as also a film developing room

for the use of the radiologist. Insofar as Central Surgical Supplies in the larger hospital is concerned, this should be a separate unit centrally located and connected to all wards either by dumb waiter or pneumatic tube.

The delivery room suite will follow the general pattern of the surgical operating room suite with one delivery room approximately 16'0" x 16'0" provided for each twenty maternity beds. The labour rooms which can be somewhat smaller and of the order of two per delivery room may, when necessary, be used for deliveries.

Though those two suites should be on separate floors if capital cost is of critical moment, it is considered, particularly insofar as the small hospital is concerned, that with strict observance of proper surgical technique, these two suites may be so arranged to give some degree of divorcement whilst allowing them to share such facilities as the central work and sterilizing room the doctors' and nurses' changing rooms and showers, etc.

The nursery suite for the new born should be air conditioned and located away from the delivery room suite. It should be so designed that entry can only be obtained through the nurses' chart room, placed centrally with a nursery to accommodate from eight to ten babies in individual cubicles on either side of it. The space allowable for each cubicle should be of the order of 30 sq. ft. Provision should also be made for prematures as well as suspect and isolation nurseries, and the total number of bassinets to be provided should be approximately 40% greater than the number of maternity beds. They, in turn, will be from twelve to twenty per cent. (average 14%) of the total bed capacity.

The ancillary or adjunct diagnostic and treatment facilities comprising the pathological laboratories, morgue and autopsy room, radiology, B.M.R. and E.C.C., the physiotherapy, the pharmacy and central surgical supplies, due to the large share of their work being such that either the patient or the specimen to be examined can be brought to them, predicates that those departments be grouped together, and this particularly where the smaller hospital is concerned. In the larger installation, they may each occupy their own separate accommodation, but will be located on the basis of traffic flow and as centrally to the wards and out-patient departments as possible.

The ground floor of the smaller hospital lends itself for the locating of the outpatient department facilities coupled with the pharmacy occupying one half of the space and the ancillary diagnostic and treatment facilities occupying the other half. The provision of a separate entrance on ground level to the outpatient department, separate from the main entrance, is most desirable as it keeps in two separate traffic flows the ambulant patients from visitors and hospital staff. Near the O.P.D. entrance should be located the pharmacy, and contiguous to it the registration desk and O.P.D. records office. Following this, the general waiting room with its toilet facilities for men and women and, if space is available, a canteen should be provided as well as telephone pay stations. In addition to an adequate number of examining rooms, there should also be a small emergency operating room and near it should be the ambulance entrance with direct elevator service. Adjacent to this is a convenient location for the department of radiology, which in turn should also be near to the elevators so that it can readily serve both indoor and outdoor patients. From this point might extend out a quiet room acoustically treated for B.M.R. and E.C.C., the laboratories, the physiotherapy department, the morgue and the autopsy room, preferably with its own exit. The space occupied by those departments will amount to approximately fifteen per cent. of the total square footage of the hospital.

The service facilities, embracing the power house, laundry, dietary, dining room, bulk storage, sub-staff locker rooms, etc., are actually better placed in their own separate building. All sub-staff should channel through one entrance so that proper control over their comings and goings may be exercised, particularly if time clocks are used. Where a separate building is not provided for those purposes, they should be located as far away as possible from patient areas on account of the noise element inherent to them. The space allotted to them, particularly for the dietary department and bulk storage, must be adequate. The latter is especially liable to be overlooked but it is of especial importance as the constant cry, after a few years' operation, is that there is not sufficient storage space. It is always difficult to obtain on initial planning an adequate allotment of space for this purpose as it then looks like so much wasted room, but the requirement should be of the order of twenty-five to thirty square feet per bed or five per cent. of the total square footage for the dietary per se and for bulk storage, 4 to 4.5 per cent.

The area required for the power house proper will be specified by the consulting engineer but usually this occupies somewhere between two or three per cent. of the total square footage. Mention is made of this department because it is usually within its confines that the central ice field is placed. Since crushed ice is used for so many purposes in the hospital, it is of the greatest importance that the ice storage and ice crushing facilities be constructed and kept in the most sanitary condition possible. Unfortunately frequently it is a matter of grave concern to realize how inadequate the protection against the harbouring of pathogens is afforded the patient. The question arises as to whether the providing of individual ice making units for each ward and which would be under the supervision of the nurse in charge should not, even at increased expense, be installed.

The dietary department may be planned either for centralized tray service or bulk food services. Inasmuch as there is but little difference in the sum total of space assigned and there is always the possibility that, under

central food service, the meal may arrive at the recipient in an unpalatable condition, the whole question is still highly controversial, but it would appear that most administrators favour the bulk food service system. No matter what system be adopted, the kitchen should be so laid out as to permit the food, from the time it is received in the raw state until it is finally processed, following through in orderly sequence, so that when it is served it is in an appetizing and palatable condition. This, it is contended, is best achieved by adopting the bulk food service system.

The most important features of a kitchen layout may be summarized by stating that the meat and dairy refrigerators and day storage should be off the receiving vestibule and that contiguous to them will be the preparation rooms leading to the kitchen proper with its steam kettles and stoves, and the assignment of space should permit of all dirty work being done on one side whilst the clean work is done on the other. Ample circulation space should also be provided for the electrical heated food carriers. Provision should also be made for a special diet kitchen so placed that it is in the line of completed food preparation so that the special diets may be picked up at the same time as the bulk prepared food is en route to the wards. The establishing of a bake shop, staff dining rooms, and central dish washing should also be undertaken. As regards the garbage room it should be refrigerated and situated near the rear entrance. The space occupied by the dietary department should approximate between five to seven per cent. of the total square footage of the hospital.

Another of the service departments that merits mention, as not infrequently it is cramped, is the central linen room. This department should have ample accommodation for the receiving, storing, and distribution of all new fabrics and those returned from the laundry. Forming part of it should be a well lighted and airy sewing room. In conjunction with this department there should also be provided a room for the collecting and sorting of all soiled linen before it is sent to the laundry, whether it be operated by the institution or by an outside contractor. In the case of the former then this department should be contiguous with and form a part of the laundry. In terms of space required it will be in the neighbourhood of 3% of the total square footage.

In regard to the space allotted for administration, this is usually and best placed convenient to or off the entrance lobby. The information office together with the telephone switchboard should be right in the entrance lobby so that control of the comings and goings of visitors and staff alike can be readily maintained. The feature of having the telephone switchboard in the information office is so that, during slack hours, one individual can take care of both functions. This does not prevail in larger installations where on account of individual loadings each should have its own space allotment and may be quite divorced from each other. Private offices should be provided for the administrator, the director of nurses, and the business manager. Each of those offices should either have their own or shared secretarial offices and their own toilet facilities. Adequate space should also be assigned for the general office, its vault for the keeping of records, and supply cupboards. Stemming out from the other side of the entrance lobby accommodation will be apportioned for a conference room, medical record room and library, attending staff cloak room and dressing room, and a patients' library. It is felt to be of no small advantage to have the medical record room on the attending staff line of traffic as it enables the medical librarian to readily contact the doctors regarding that always vexing problem, namely, the completion of case histories. Dead storage for medical records is usually most conveniently arranged by having it immediately below the medical record room in a fireproof basement room. The adoption of micro filming will save on record storage space.

In these days of rising building costs, scarcity of supplies and adequate help, may it be cautioned that no set plans or standards can be laid down, but that the planning of each hospital is an individual problem and must be planned in the light of local circumstances and conditions. It not infrequently has happened in the past that many small hospitals have had facilities planned for them which did not rightly belong there whilst others have been ignored and this has been most apparent in the provision of adjunct diagnostic and treatment services. These departments merit the most careful attention as with the ever increasing appreciation by the public at large of the value of maintaining the individual in good health, more and more ambulant patients are and will be coming to the hospital not only for treatment but for the purpose of seeking diagnostic tests or checkups.

In concluding this paper may two points of detail which are of vital importance and which have not been touched on be now mentioned. I have particular reference to the size of ward door openings and corridor widths. In not a few instances those two items have not been given consideration, which has resulted in rather unfortunate situations. It is suggested that in order to permit of bed and foot traffic making use of the corridor at the same time, it should be of a minimum of 8 feet width, and in certain locations where traffic is heavier, a minimum of 10 feet. As regards ward door openings 4 feet is most desirable as the overall width of the hospital bed must be considered as 3'6". If for no other reason, the fire or smoke hazard so vital where bedfast patients are concerned, is of sufficient import to merit special attention to these points.

Whilst no attempt has been made in this paper to review all the details and ramifications of hospital design, its main purpose will have been served if it has acted as a means to stimulate further discussion from the floor.

THE FORTY-FIRST ANNUAL ASSEMBLY OF THE ROYAL ARCHITECTURAL INSTITUTE OF CANADA

THE Inaugural Session of the Forty-first Annual Assembly of the Royal Architectural Institute of Canada, held in the Chateau Laurier, Ottawa, Ontario, on Tuesday, February 24th, 1948, at 9.30 a.m.

Mr. Chas. David, President, in the Chair.

REPORT OF THE COUNCIL

May I be permitted to add to the words of welcome so generously extended by His Worship the Mayor of Ottawa, my most cordial greetings to members of the R.A.I.C. attending this Forty-first Annual Assembly. Not since 1939 has the Institute convened in this Capital City; and those who were then present will recall the important and influential meetings that were held, as well as the warmth and joviality of the receptions that were tendered.

The Institute has previously manifested a wish to pay yearly tribute to our members who sacrificed their lives in the two World Wars. May the Assembly pay this tribute by standing in reverent silence.

During the year just elapsed, we have to record with deep regret the loss through death of some twenty of our members. I again request you to stand in tribute to the memory of:

Mr. H. W. Meech (F), Alberta.
Mr. S. M. Eveleigh (Honorary Member), British Columbia.
Mr. Alex Carrie, British Columbia.
Mr. H. Perram, British Columbia.
Mr. W. F. Williams, British Columbia.
Mr. S. K. Sinclair, Ontario.
Mr. Frank M. Cameron, Ontario.
Mr. Wilfred Truman Shaver, Ontario.
Mr. W. P. Witton, Ontario.
Mr. W. F. Smith, Ontario.
Mr. E. A. H. Menges, Ontario
Mr. Jay I. English, Ontario.
Mr. V. D. Horsburgh, Ontario.
Mr. L. Fennings Taylor (Honorary Member), Ontario.
Mr. John T. Findlay, Ontario.
Mr. W. M. Wilson, Ontario.
Mr. Hugh Vallance (F), Quebec.
Mr. Hugh G. Jones, Quebec.
Mr. Charles Coxall, Saskatchewan.
Prof. A. R. Greig (Honorary Member), Saskatchewan.

The passing of these members is deeply regretted by our profession and a very personal loss to their many friends.

The favourable conditions outlined in my report to the Assembly last February have been continued throughout 1947, and the services of the profession are still in great demand. Coupled with the favourable conditions, however, are the disquieting factors of material and labour shortages, which together with recurring increase of costs give rise to grave doubts as to the future.

Two years ago, your Council was instructed by the Annual Assembly to implement the establishment of permanent headquarters of this Institute in the Capital City of Ottawa, such action to be taken not later than December, 1947. After much consideration, and after examination of the estimated costs, your Council concluded that the move to Ottawa must necessarily be predicated on unanimous acceptance by the Provincial Associations of an increased pro-rata contribution. As such unanimity is not forthcoming, this Council recommends to the Annual Assembly that the matter be deferred until reconsideration is warranted by the financial position of the Institute.

Acting upon recommendation of the last General Assembly, your Executive Committee reconsidered the Canadian Council of Professional Engineers and Scientists' brief on Collective Bargaining, and decided to re-affirm its opposition to the inclusion of the architectural profession in the application of the proposed collective bargaining legislation. However, if such exclusion could not be granted, it was requested that proper safeguards be introduced into the Act which would ensure that bargaining for professional men be done by agencies nominated and composed of professional men.

The Institute made further representation to the Department of Labour as to the proposed legislation and in the draft of the Bill, as it now stands, Architects together with certain other professional men are excluded from the operation of the Act.

Early in the year, the Central Mortgage and Housing Corporation requested the co-operation of the R.A.I.C. in the production of designs for low cost houses. Faced with the tremendous demand for homes required by the population of this country in the immediate years to come, the Institute was and is ready to give support to any system by which the C.M.H.C. can hope to meet the demand.

The Institute agreed to the nomination of a Screening and Advisory Committee, and suggested to the Provincial Associations a standard of remuneration. This standard was not acceptable to all Provincial Associations, and in order to facilitate matters, the C.M.H.C. was authorized to deal directly with the Associations. It was felt that this freedom of action would resolve differing provincial points of view and free the way for action. Unfortunately, this did not eventuate.

It is a fair question to ask whether the Architects, the Construction Industry or Central Mortgage, or all combined are responsible for lack of progress, but when we look at the matter dispassionately, may it not be claimed that there is no royal road to solution of a problem which is worldwide? It may also be stated that, under present conditions, there is no such thing as "low cost housing." Certainly, no consideration of our housing emergency can be complete if it fails to include the problem of the "little man" who neither has nor ever will have the wherewithal to consider housing on an ownership basis.

Is it not equally true that the demand is for more houses and not more designs? No architect, however competent, can solve the problem by magic and in truth, certainly the solution does not lie in picayune variations of Cape Cod and Quebec Traditional. Study of the economics of the matter shows that any reasonable arrangement of five rooms requires approximately the same amount of material.

Attempts have been made to find a solution by simplification, but spiralling costs of labour and material overrun minor economies. This is a gloomy picture. We are not supermen, but it is to the credit of the profession that, despite discouragements, there are Architects who are spending time freely to create a solution, if they cannot find one. Such a solution may not be in accordance with the minimum standards of the N.H.A. and it may not be a thing of beauty, but it will be a joy for the period of its physical existence to people who at present are craving for a roof over their heads.

Upon the resolution from the Annual Meeting requesting the Executive Committee to urge the National Capital Planning Commission to set up its public relation machinery as soon as possible, it was found desirable to leave the matter in abeyance until a definite picture was available.

Further study of the possibility of standardizing requirements for admission into Provincial Associations was considered by the Executive. This is a delicate matter as the Provinces are the masters of their own destiny. However, most of the Associations have been very co-operative in furnishing information, and the replies to a questionnaire concerning the various Architects' Acts, together with a comparative chart based on these replies, are at this time ready for publication. The Manitoba Association of Architects has made known to the Institute that it wishes to discuss at this meeting reciprocal membership with other Provincial Associations.

During the year, the Institute was invited to attend the VI Pan-American Congress of Architects which was to be held in Lima, Peru, and also to contribute to the many exhibitions which were held in conjunction with the Congress. Your Executive regretted its inability to send representatives to the Congress, but made a contribution by sending an interesting selection of exhibits composed particularly of books on Canadian Architecture and a series of the best examples of the R.A.I.C. Journal. The Architectural Library of the National Film Board, at the instance of the Institute, supplied a duplicate of an exhibit which it had prepared for an exhibition in Brazil.

As you will recall last year, your Executive strongly supported the formation of the Community Planning Association of Canada, and this Institute, in becoming one of its Sustaining Members, felt that every effort should be made to encourage Architects to become individual members of this new Association.

Their first Annual Meeting was held in Montreal in October last, and the Institute had its official representatives at the conferences. The meeting was a success, and it is the feeling of your President that it resulted in a very marked appreciation of the fact that in the organization of Community Planning developments, a combination of the talents of various professionals is necessary. No one profession can or should claim competence to advise on every aspect of problems which have so many and diverging ramifications.

Early in the year, your Executive Committee was invited by the Under-Secretary of State for External Affairs to submit a list of outstanding Architects for a membership on the Board of Design Consultants of the Headquarters Advisory Committee of the United Nations. A list was submitted, and Mr. Ernest Cormier, of Montreal, was selected to represent Canada on the Board of Design Consultants.

The R.A.I.C. was requested to endorse the recommendations contained in a report of the New Developments Committee of the Canadian Construction Association, and presented to the Department of Reconstruction in Ottawa. This report concerned the formulation and preparatory planning of projects that might be developed to the hardships of a possible depression. After a careful study, the R.A.I.C. notified the Department that, despite prevailing conditions in the industry, the implications contained in the report were all too obvious. Conscious of the difficulties confronting the Government which would result from lack of foresight, it was felt that drastic steps should be taken to avoid unfortunate experiences of the past, when lack of preparedness resulted in long delay before ameliorative projects could be put into operation.

The R.A.I.C. endorsed the efforts of the C.C.A., and it is our hope that the whole matter will receive consideration and action by the Government.

In the course of the year, your Executive, wishing to ensure that annual fees paid by salaried Architects should be considered as business expense and thus be exempt from Income Tax, requested a ruling from the Department of National Revenue on the matter. As the ruling received was not entirely satisfactory, it was submitted to the Institute's legal advisor for consideration and report.

Your Executive was very much interested in an invitation it received from the National Film Board to sponsor an educational film on Canadian Architecture. As a preliminary survey on the possibilities of such a film was essential, the Committee granted full authority to its representative to contact such Government Departments and other organizations as might be considered necessary to the realization of such an educational film.

Complying with a wish expressed at the first meeting of the Council, your Committee examined the possibilities of holding the Annual Assemblies in the West or Middle West. British Columbia was considered, but notwithstanding the earnest desire of the Committee, it became evident that the realization of such a hope was not possible under present circumstances.

With reference to the Copyright situation, your Executive, through its solicitor, has contacted many important publishing companies in the hope of remedying the inequity that was being practised in the publication of architectural plans without credit to the author. The Daily Newspaper Association was requested to lend its assistance in obtaining the co-operation of the daily newspapers across Canada, to the end that the names of Architects be published together with the plans and drawings of buildings.

The Executive Committee had cherished the hope that, during the year, the Architectural Training Committee would find the opportunity to hold a mid-year meeting. Unfortunately, several members indicated their inability to attend and the proposition was abandoned. The hope is nevertheless again expressed that such meetings be held as the results would be invaluable.

In recognition of the arduous nature of the Presidential duties, which have become increasingly onerous in recent years, and in further recognition of the desirability of widening the opportunities for members to attain the honour of Presidency of the Institute, the question of the length of the term of office of the President came up for discussion at the Executive Committee. Divergent opinions were expressed, and it was found that this term of office is so intimately related to the establishment of a permanent secretaryship in the Institute that the incoming Executive would appreciate receiving further directions from this Assembly before final decisions can be arrived at and submitted to a further annual meeting.

Before ending this report, may I be permitted to mention the success attained by the French translation of the brochure on Architecural Training. Like the first version, it has been exceedingly well received and is in a constant demand. I wish in the name of my French compatriots to thank the Institute for this friendly gesture.

This report, gentlemen, is a résumé of the activities of your Council for the term ending with this Assembly. Before inviting its adoption, I wish to express my personal gratitude to the members of the Council, those of the Executive Committee, Chairmen and members of various Committees, the Editor of the *Journal* and his associates, for their generous co-operation and unflinching support manifested during the year. My sincere thanks are also expressed to our devoted Executive Secretary who has displayed a wonderful comprehension of the affairs of the Institute and manifested great ability in the performance of her duties.

The Executive which took over the administration of the Institute in February, 1946, completes its term of office with the feeling of having maintained continuity in the policies of previous administrations, and it is hoped with the satisfaction of a duty fully accomplished.

To the Committee of Arrangements of the Ottawa Chapter of the Ontario Association of Architects, I offer grateful thanks for planning such an interesting meeting, and to the Ontario Association of Architects I renew these expressions of thanks for the delightful hospitality tendered and to be tendered to the members of the Royal Architectural Institute of Canada on the occasion of this Forty-first Annual Assembly.

FINANCIAL REPORT

The following is a summary of the Report of the Honorary Treasurer, Mr. A. J. Hazelgrove (F), as confirmed by the auditor.

Revenue

Pro Rata Contribution from Component Societies	$5,718.50	
Sale of Contract Forms	1,764.06	
Re the *Journal*, R.A.I.C.	6,333.99	
Sundry Receipts	120.00	
Total Revenue		$13,936.55

Expenditures

Secretary's Salary	$1,781.28	
Convention Expenses	1,933.06	
Travelling Expenses	1,269.17	
Rent—Toronto Office $228.00		
Montreal Office 100.00		
	328.00	
Allied Societies' Fees	358.67	
Printing, Stationery and Office Expenses	227.35	
Telephone, Telegrams and Postage	599.43	
Scholarship and Competition Awards	21.88	
Insurance	15.76	
Audit Fee	50.00	
Legal Fee	300.00	
Architectural Training	10.00	
Cost of Contract Forms	425.67	
Journal (1946 Grant of $1200)	194.35	
Unemployment Insurance	32.76	
Sundry	188.08	
Total Expenditures	$7,735.46	
Provision for depreciation of furniture and fixtures — Toronto Office	65.80	
		$7,801.26
Gross Surplus		$6,135.29
Less Bonds purchased		3,160.05
Net Surplus		$2,975.24

Summary of Assets:

General Account — Cash, Bonds and other Assets	$15,750.34
Capital Account — Cash, Bonds (Fellowship Entrance Fees)	9,285.53
Scholarship Account—Cash, Bonds (Fellowship Annual Dues)	5,719.25
Total Assets	$30,755.12

CHAS. DAVID, *President*

MONUMENTAL ARCHITECTURE

By MGR. OLIVIER MAURAULT, *Recteur de l'Université de Montréal*

An Address at the Fifty-Seventh Annual Meeting of the P.Q.A.A.

This is not a speech. It is merely a short appeal in favour of monumental architecture.

The question was envisaged in a recent issue of the British magazine *The Listener*. The author of the article, Nikolaus Pevsner, himself an architect, I presume, voices his lack of hope in the future of monumental architecture after considering the failure of such attempts as Washington, D.C.

Of course, we all agree that Washington is a beautiful city. And if the Lincoln Memorial or the Jefferson Memorial, or the Mellon Gallery or the Supreme Court, are examined separately, they appear as noble buildings, very impressive indeed! But if you look at the other surrounding government buildings, you cannot refrain a feeling of monotony. There are too many Greek and Roman columns in Washington, too many classical porticos, and too many rows of windows, very elegant, I am sure, but all alike. Mr. Pevsner calls them "borrowed monumentality." The reddish Smithsonian Institute and the sumptuous Congressional Library, although of different style do not correct the impression.

Dazzled by such display of archaeology it is afterwards refreshing to contemplate the exquisite façade of the Folger-Shakespeare Museum and amusing, in a melancholic manner, to read on a fountain close by, this verse of the Poet: "Lord! what fool's these mortals be!"

Now the author of the article, in *The Listener*, having decided that Washington is a magnificent failure from the architectural viewpoint, wonders what the large cities of the future will do in their endeavour for embellishment. He ventures a few examples of modernistic architecture, similar to those which can be seen in a World Fair but not convincing. I saw some of them in Rio: the very remarkable Ministry of National Education, in particular, is a combination of glass walls and immense stone walls without openings. Extremely interesting as an attempt, one cannot imagine what an *ensemble* of such buildings around a Civic Centre would look like. Of course, the human mind is very plastic, I know, and can get used to anything. I recall the times when Wagner's music appeared unintelligible and now we enjoy—at least some of us do—the symphonies of Shostakovitch.

Another factor increases my anxiety. It is the invasion of the so-called *functional architecture*. Good architecture has always been more or less functional but if you place too much emphasis on function, the results are what Le Corbusier calls *la maison-machine*. I have seen in Villa Obregon the home of Diego Rivera, the Mexican painter. It is indeed a machine! I do not like it.

Some years ago, after visiting the new Cincinnati Railway Terminal, I asked a friend of mine why Ottawa had chosen to give the Canadian National Railways Station in Montreal the outward look of a sky-scraper, and why our main Post-Office had such resemblance to a departmental store? He answered that he had been told that the new formula for public buildings was to be the end of the *opera-comique* architecture responsible for the St. Louis Terminal, the Washington Central Station, the Pennsylvania Station and the Grand Central in New York, the Toronto Central Station, the Windsor Station in Montreal. And those columns around the Post-Offices in Washington and New York, what have they to do with the mail after all? And what has become of those architectural façades? The New York Post-Office façade is now overshadowed by sky-scrapers and you can hardly enjoy a bit of it due to lack of space in front.

This last point should be stressed in Montreal. There are very few *perspectives* worthy of the name in our city and I doubt if we shall ever be able to have more than what we already have: the Rue Sainte-Famille, Laval Avenue and Boulevard Morgan. Are there any others?

At all events it seems that Montreal is striking the building age just too late to ever boast of a decorative *ensemble* comparable—let us mention at random—with Pasadena's or San Francisco's Civic Centres, even if these were archaeological achievements.

Then, Gentlemen, what are you going to do? Will you be able to reconcile our two neighbours, the Cathedral and the Sun Life Building, and correct their disproportion? Modern town-planning suffers greatly from such defects: remember Toronto's Central Station opposing the Royal York Hotel; Rockefeller Centre dwarfing St. Patrick's Cathedral . . .

I am confident, nevertheless, that my good friends the architects here present will succeed in improving the architectural aspect of our lovable city and that they will not deliberately avoid all future attempts towards monumental architecture. Concrete and glass have not yet spoken the last word . . .

You now see, Gentlemen, how imprudent it was of you to invite me to say a few—words. I have spoken with the customary—silliness of an *amateur*, seemingly unaware of his ignorance. I hope you will forgive me!

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NEWS FROM THE INSTITUTE

ALBERTA

President's Address
Annual Meeting Alberta Association of Architects
January 23, 1948

Ladies and Gentlemen:

In these eventful days it seems that time flies more rapidly for it is like yesterday since I last enjoyed this privilege of addressing you at our annual meeting. May I extend to you, one and all, a very warm welcome to this our thirty-seventh annual meeting.

I consider this annual meeting a particularly significant one in that we are meeting in the City of Calgary for the first time in many years. I know that it has long been the wish of the Edmonton members that we might hold such a conference here, but with due appreciation for economy and efficiency, and perhaps a secret desire to whoop it up in a big city, our Calgary friends have long insisted that our annual meetings should be held in the city of our headquarters.

Looking back over the past year we realize that the prophecies and optimisms of a year ago have not come to pass and we still find ourselves in a world in which there is a great deal of uncertainty and instability both in the fields of international politics and national economy. Prices on materials and services have continued to rise and today we find the cost of construction has exceeded by eighty per cent comparable costs of 1939. Such a phenomenal rise has created in the minds of many the inevitable and undesired question "When will the recession or depression set in?", for ironically, coupled with this question, is the thought that without such a recession we cannot hope to obtain from labor efficiency of production.

To the architect the emergencies of the housing situation caused by the war years has created a problem which may continue to grow to the detriment of family life in our communities. I refer to the rows and rows of stereotype homes which have sprung up around us, particularly so called "wartime houses." Surely a small sacrifice in time and money for variety of design would be welcomed by the citizens of everywhere. It is indeed regrettable that the Central Mortgage and Housing Corporation has recently decided against using the architects of this country for the production of plans for cheap distribution to the prospective home owner.

I feel privileged to advise you at this time that I have had the honor of serving on a committee appointed by the Dominion Fire Commissioners, and under the chairmanship of Mr. R. R. Moore Provincial Fire Commissioner, to draft uniform legislation covering construction of hotels, apartments, and rooming houses. As you are aware considerable alarm was felt by many from the series of disastrous hotel fires which have occurred recently in this country and the United States. This matter was given serious attention at the annual meeting of the Dominion Fire Commissioners and Fire Marshals in Vancouver in the spring of 1947 and at that time it was felt that uniform legislation respecting the construction and maintenance of these classes of buildings should be enforced by the governments of each province in order to effectively minimize the hazards to life and property. After many meetings and discussions a final draft of this proposed legislation has been placed in the hands of the Fire Commissioners of each province for presentation to their governments. It is expected that approval will soon be forthcoming from the Government of the Province of Alberta. Of particular note will be the powers incorporated in the proposed act affecting existing hotels, apartments and rooming houses. Owners of such buildings will be required within reasonable time to make such changes and alterations to assure the safety of the occupants and to reduce the fire hazard.

You will again be asked to discuss at our annual meeting the question of revisions to the Architects' Act of 1938. With the desire of the Royal Architectural Institute of Canada to increase the pro rata contributions from each member it will be necessary for us to increase the fees of the members by amendment to the Act or to obtain such additional funds by means of a levy. It is further obvious that the powers of the Act limiting the value of buildings which may not require the services of an architect has placed this phase of control out of focus because of the increased building costs. It would appear much more desirable to enlist the co-operation of departments of the government to require plans by architects for all buildings of public assembly, hotels and apartments, schools, etc., in the same manner as is required for hospital structures. It is hoped that agreement can be reached so that the necessary amendments can be made at the forthcoming session of the legislature.

In conclusion I express my thanks to you for the honor of this office and to the members of Council, and particularly the Secretary, for their splendid co-operation in the handling of the affairs of the Association.

M. C. Dewar

ONTARIO

Modular Co-ordination is a strange and formidable term, meaning roughly – that a house or factory can be built with plans and materials based on a four-inch unit of measurement – and save money.

The term will not long be strange. Increasing numbers of us will build, live in, and work in modular designed houses made of modular co-ordinated materials; in houses planned according to a new standard of measurement – the four-inch module, and built of materials sized in the same way. Thus houses will be put together with a minimum of on-the-job cutting and fitting.

Modular co-ordination is so sensemaking that already it has had a powerful effect on architecture, building and building materials in the U.S.A. It is also a new system of design and also a project in which architects and building material producers have joined to benefit a whole industry.

Ever since man began building, he has made doors, pipes, bricks, windows, and other materials and parts in an infinite number of sizes. In order to fit them together, skilled workmen have had to spend countless hours cutting, sawing and bending.

If all massed-produced building materials could be dimensioned to fit into place without cutting, and if architects would draw plans to make such use of them, building costs would be lowered and the way would be opened for the true mass production of housing. This is the job that modular co-ordination sets out to do. How? By applying the four-inch module to plans and materials and co-ordinating both.

For instance, all the major dimensions in a modular building would be in multiples of four. The same measurements would apply in materials. Take brick for example: A standard type of brick has been made with a length of eight inches which sounds like a modular dimension, but when one-half an inch of mortar is laid between each of the bricks in a row, the modular unit is lost. Therefore, under the modular system, this type of brick is made only seven and one-half inches long. When a half-inch mortar joint is added, the module unit is achieved. Walls, frames and other fittings are similarly designed.

This is where an organized modular co-ordination movement comes in. In the U.S.A., the American Standards Association, the American Institute of Architects, the Producers Council, and the Modular Service Association have joined to bring about such an organized movement.

This new technique not only required the co-operation of thousands of individuals and whole industries but altering of many material sizes. In the beginning it looked impossible, but the American Standards Association called an all-industry conference at which a project was organized, known as project A62, the 62nd on the A.S.A. list.

Some progress was made during the war, but it has been since the war that modular co-ordination has gathered speed. In February, 1947, the Office of Technical Service of the Department of Commerce gave aid with a research grant to the Modular Service Association. Seventeen study committees working under project A62 are devising new standards in their particular fields. Among them are committees on masonry, metal and wood sash, and many others. Some of the work is finished, and new standards in these cases have been recognized as "American Standards" and have gone into effect throughout a large part of the industries.

To-day in the U.S.A. about one-half the producers of brick are making modular sizes. About 75% of the structural facing tile industry has changed over. The concrete masonry industry has shifted in large part. Steel sash, glass block, insulation, wall board and many finish materials are made in modular sizes. Although many architects have not yet used modular principles, the American Institute of Architects and some of the architectural schools in the U.S.A. are strongly urging the system.

The advantages of modular co-ordination are great. The manufacturer is enabled to eliminate many odd sizes, to simplify manufacturing processes and to lower inventories.

For the architect – modular co-ordination means the reduction of complex labour in fractions without reducing his freedom of design.

For the contractor – it means simpler plans and less labour.

For the owner–lower building costs. With full use of modular materials and plans, it is possible that costs eventually may be cut quite considerably.

About all that can be said against modular co-ordination is that it forces producers and architects to give up some ingrained habits. It requires change, and that is often painful.

Many U.S. architectural leaders call the adoption of modular co-ordination under the A62 project, "One of the greatest advances that the construction industry has ever made, and also one of the most heartening demonstrations the country has ever had, and that being – that ability of its people to do an almost impossibly complex job, not by decree but by purely voluntary co-operation.

K. A. Cameron

QUEBEC

Pour se préparer aux saisons plus clémentes qui marquent un essor dans la construction, les associations intéressées à cette industrie se réunissent ordinairement dès les premiers mois de l'année. L'Association des Architectes de la Province de Québec ne manque pas, suivant la coutume établie, de tenir à cette époque son assemblée annuelle en vue de permettre au Conseil sortant de rendre compte de son mandat pour l'année écoulée, et procurer à l'assemblée l'occasion d'exprimer quelques judicieuses suggestions pour l'avenir.

Tous ceux qui ont assisté aux délibérations de cette assemblée annuelle en ont gardé un excellent souvenir, tant à cause des innovations apportées que pour l'esprit de solidarité et de camaraderie qui y a régné. Plusieurs

de nos confrères n'avaient pas hésité à entreprendre un voyage, pour quelques-uns assez long, afin d'assister à cette réunion. Satisfaits des services de l'administration qui cédait la place au nouveau Conseil, plusieurs n'en ont pas moins fait certaines suggestions de nature à rendre le travail plus fructueux.

Les membres ont marqué cette année un intérêt tout spécial aux débats concernant leur profession. La plupart de ceux qui prirent la parole démontrèrent avec clarté les raisons et le bien-fondé de leurs suggestions.

L'assemblée fût répartie en quatre séances: les deux premières le vendredi 30 janvier, et les deux autres le lendemain. Cette procédure nouvelle de discuter en quatre étapes successives un programme chargé procura à certains l'occasion de pouvoir discuter à loisir de problémes touchant la pratique. Les membres semblent avoir apprécié l'occasion que leur procurait cette réunion de refaire connaissance et d'échanger des points de vue sur des questions relatives à la profession.

Chaque membre heureux d'accepter un poste ou de participer à quelque travail comprit qu'il était de son devoir de s'imposer des sacrifices, afin d'y consacrer tout le temps et l'étude qu'il fallait pour atteindre les fins proposées.

Cette assemblée annuelle fut des plus réussie, de l'aveu même de ceux qui y ont assisté. Malgré la température très froide, l'ouverture de la séance débuta devant une assistance nombreuse. A l'adjournement tous furent invités à visiter une exposition de nouveaux matériaux et d'appareils spécialisés concernant la construction. La présentation de ces articles de première importance pour l'architecte soucieux de s'initier au progrès avait lieu dans le nouvel hôtel "Laurentien." L'étalage de divers articles démontrait, à l'aide de dépliants, les genres d'installation se rapportant aux exhibits, et même en certains cas, était représenté ingénieusement à l'aide de miniatures pour en expliquer l'emploi et le fonctionnement. L'usage de plusieurs mécanismes nouvellement brevetés était également illustré à l'aide de brochures mises à la disposition des visiteurs ou exposé à l'aide de réalisations à petite échelle. Cette exposition intéressa au plus haut point les membres présents.

A la séance du soir, des élucidations et des renseignements fort à propos furent apportés sur les rapports de divers comités. Selon la coutume, à la fin de cette séance les amis ne manquérent pas de se donner rendez-vous dans les salons avoisinants.

Le lendemain matin, vu les questions à l'agenda, la séance fut amorcée avec entrain. Les sujets discutés furent d'une telle importance que l'ajournement dut prévoir la réponse de l'assemblée après le déjeuner annuel. Ce déjeuner où régna l'entrain et la bonne humeur, fut marqué par l'intéressante causerie de Mgr. O. Maurault, recteur de l'Université de Montréal. L'assistance spécialement nombreuse sut manifester son appréciation par ses applaudissements à l'adresse de cet invité d'honneur. Nombre de personnalités en vue rehaussaient de leur présence cet événement traditionnel.

Avec bonne volonté, la majorité de l'assistance s'est réunie à nouveau pour discuter des questions laissées en suspens à la séance précédente. Plusieurs se dirigérent ensuite vers l'exposition tandis que d'autres profitérent de l'occasion de visiter l'atelier d'un jeune sculpteur de talent, M. Louis Parent, qui sans excessive hardiesse révèle de l'originalité dans la composition de ses oeuvres.

Maurice Payette, Secrétaire Honoraire

QUEBEC

The 57th Annual Meeting of the Province of Quebec Association of Architects took place in Montreal on Friday and Saturday, January 30th and 31st, 1948. The Meetings opened on Friday afternoon with the customary formalities and the report of the retiring President, Mr. A. J. C. Paine, which reviewed the activities of the Association during the past year and directed attention to certain problems with which the new Officers and Council of the Association will have to deal. Routine matters were attended to and the Meeting voted to hold the next Annual Meeting in Quebec City.

The Honorary Secretary reported on the election of Officers, Councillors and Royal Architectural Institute of Canada delegates, the President being Mr. L. N. Audet; 1st Vice President Mr. J. C. Meadowcroft; 2nd Vice President, Mr. Pierre C. Amos; Honorary Treasurer, Mr. H. Ross Wiggs; Honorary Secretary, Mr. Maurice Payette; Councillors, Messrs. John Bland, Emile Vanne, Lucien Mainguy, Geo. E. deVarennes, P. H. Lapointe, E. J. Turcotte, A. T. G. Durnford; Delegates to the R.A.I.C. — Messrs. Maurice Payette, Harold Lawson, Oscar Beaule, J. Roxburg Smith, A. J. C. Paine, R. E. Bostrom, Eugène Larose, J. C. Meadowcroft. The new Officers were duly installed, following which routine business was disposed of and the Meeting adjourned until the evening session. Most Members gathered at the Exhibition of Building Materials held in the new Laurentian Hotel. Due to the limited space available, the Exhibition was restricted to the display of new materials and building techniques. Our thanks are due to Mr. Udd of the Laurentian Hotel, who gave the space for the exhibition; to the Exhibitors who assembled displays, materials and pamphlets, and to Mr. A. T. Galt Durnford and Mr. P. R. Wilson and to their committees who made the necessary arrangements for the Province of Quebec Association of Architects. The Exhibition was open again on Saturday and was well attended after the business sessions were concluded. We hope that this year's effort will be the first step in establishing either an Annual Exhibition of Building Materials on a comprehensive scale or else a permanent Building Centre where materials, processes and designs will be on exhibition throughout the year.

The Friday evening session was concerned with routine business, the adoption of Standing Committee reports and certain other matters of little interest outside the Membership of the Province of Quebec Association of Architects. There is no need to comment on them here except to note that these sessions were no exception to the usual custom of being three quarters of an hour late in starting.

A highlight of the Saturday morning session was the Meeting's endorsement of the Finance Committee's recommendation that the annual dues be raised from $20.00 to $30.00 per Member, in order to take care of the increased cost of the Association's regular expenses. Proposals to increase the R.A.I.C. annual assessment, for the purpose of expanding the Institute's functions and for the establishment of larger offices and staff, were debated at length. Eventually it was decided that the P.Q.A.A. would not increase the amount of $5.00 per Member during 1948.

A commentary on the Annual Meeting would be incomplete if it did not mention the comprehensive report by Mr. J. Roxburgh Smith on behalf of the Delegates to the R.A.I.C. giving details of the Institute's activities during the past year. We also learned that a Committee of Past Presidents of the P.Q.A.A. was appointed to meet a Committee appointed by the Corporation of Professional Engineers of the Province of Quebec, to discuss the details of a New Engineers' Bill which the C.P.E.P.Q. intend to present to the Legislature at some future date. We trust that mutual agreement can be achieved on those points where the activities of the two professions have tended to conflict in the past.

The Membership and Scholarship Committee reported that fifteen candidates were admitted as Practicing Members during 1947 and that the Active Membership now totals four hundred and five. Further progress has been made on a new pamphlet entitled "Advice to Candidates" which is nearly ready for publication. The Association is very grateful to Professor Emile Venne for the amount of time and effort spent in compiling the document.

As in former years, the Annual Luncheon given by the Association was well attended, with many notables of the political and construction world at the head table. Alderman Sevignac, representing the Mayor of Montreal, welcomed the convention to the city and congratulated Mr. Pitts on his recent election to Montreal's Executive Committee. Mgr. Olivier Maurault, Rector of the University of Montreal, gave one of his brief and brilliant after dinner discourses, making a plea for a monumental architecture. While not specifically recommending a strict adherence to the classical formula he was apparently somewhat concerned with the prospect of some future capital consisting entirely of Smithsonian Institutes. He was thanked by Mr. Paine and Mr. Pierre Amos.

A short afternoon session opened at 3 p.m. with a scanty attendance, many of the members having taken themselves to visit the materials exhibition and to see the film on glass manufacture. Proportional representation on the Council of the R.A.I.C. was discussed. Mr. Paine emphasized the need for equalizing admission standards as between college graduates and those who obtained their training in offices and by private study. To this end the Association's entrance examinations are to be revised and a study bulletin is to be issued.

Richard E. Bolton

BOOK REVIEW

HEPPLEWHITE FURNITURE DESIGNS.

Edited by Ralph Edwards, F.S.A.

Published by A. Tiranti, 41 Ship St., Brighton, Sussex, England. Price 7/6

In looking through this reprint of "The Cabinet Maker and Upholsterer's Guide" (3rd Edition 1897) the contemporary individual must surely be amazed that so small a thing should have had so vast an effect. A. Hepplewhite and Co., about whom nothing is known, published these drawings of furniture "blending the useful with the agreeable" at a period in 18th Century taste which happened, temporarily, to be free of the most frivolous of contemporary fancies. This gained Mr. H. little in his lifetime but it has placed the name Hepplewhite next to that of Chippendale and Sheraton high on the shelf of culture.

In Grand Rapids, in Stratford, and in points both East and West, his book is still continually being taken down from this exalted shelf with the most unfortunate effect. Mr. H. hoped to be "useful to the Mechanick and serviceable to the Gentleman." He can no longer be useful or serviceable to us because both these classes are dead. The modern imitations of his furniture in our houses are constant and frustrating reminders of this debasing fact. Mr. Edwards, F.S.A. does not say whether Tiranti's has published this reprint to subvert our society or not. If they did not the book may serve as a useful record.

Anthony Adamson

RESIDENTIAL LIGHTING

By Myrtle Fahsbender

Published by D. Van Nostrand Co. (Canada) Ltd., 228 Bloor St. W., Toronto. Price $12.50.

This book is a fascinating treatise on lighting of the home. Functional, aesthetic, and technical considerations are interspersed throughout the book with a freedom which conveys to the reader the important feeling that these three aspects of the subject need not be in conflict with each other, as is so often the case.

Beginning with a technical summary of all general types of lighting equipment available, the author then "flashes back" to an historical discussion of the influence of period styling on fixture design for such types of architecture. Following this are discussions on how period and modern designs may be suitably combined, and on the treatment of contemporary architecture.

Garden lighting, Christmas lighting and home wiring are also dealt with.

The many illustrations will be useful in visualizing the relation of lighting to architectural design. In particular, the observant architect will note from comparison of these illustrations that the best results of lighting are obtained only in those buildings which favour good lighting by their original concept and design rather than by attachment of miscellaneous lighting equipment.

The order of presentation of information in this book might well be criticized, but the important point is that all necessary information is included somewhere, and the index will assist in location of specific points.

This book may be recommended to architects for its explanation of functional lighting fundamentals, its illustrations and ideas, its information on how to carry out these ideas: to prospective home owners and those interested in renovations for its illustrations of what can be done by means of lighting: to the manufacturer of residential lighting equipment for its illustrations of good lighting and the absence of so many types of equipment found on the market to-day.

Edward L. Dodington

CONTRIBUTORS TO THIS ISSUE

Hugh Ferriss. Born St. Louis, Mo., U.S.A., 1889. Studied at School of Architecture and Engineering, also School of Art, of Washington University, St. Louis. B.S. in Arch., 1911; Honorary M.Arch., 1928.

Registered Architect, N.Y. State, 1930. Member:—American Institute of Architects, (Executive Comm., N.Y. Chapter, '41-'42), Architectural League of New York, (President, '43-'45), Municipal Art Society of N.Y. (Board of Directors, '46), Art Commission of N.Y. City; term: '47-50.

Own office since 1915 specializing in designs and drawings of architectural and city-planning projects. Retained as Design Consultant and/or Delineator on projects of N.Y. City, N.Y. State, U.S., and numerous private concerns.

Original work shown in architectural exhibitions and professional journals of England, Europe, South Africa, United States. Various awards from Architectural League of New York, American Academy of Arts and Letters.

Retained by United Nations, March '47, as Special Consultant to Headquarters Planning Staff, in charge of perspective design-studies.

John C. Mackenzie, born in Scotland; came to Canada after World War I, having served as an officer in the Argyle and Sutherland Highlanders; graduated from McGill University as M.D.C.M. in 1928. After graduation, interned at Montreal General Hospital and then specialized in hospital administration, being appointed general superintendent of that institution in 1931. At the outbreak of World War II, Dr. Mackenzie was posted to Canadian Medical Headquarters, London, England, as officer in charge of hospitalization. Subsequently he served in a similar capacity at National Defence Headquarters, Ottawa, Ontario; retiring from the army in 1946 with the rank of Colonel. For his services he was awarded the O.B.E. On leaving the army he was appointed Hospital Consultant for the Department of Veterans' Affairs and also the Department of Heath and Welfare. In addition to his medical degree, he has a D.P.H. from McGill University and is a Fellow of American College of Hospital Administrators and a Fellow of the Institute of Hospital Administrators (England).

PARTNERSHIP

Ernest J. Smith, M. Arch., M.R.A.I.C., Dennis H. Carter, B. Arch., M.R.A.I.C. and Walter L. Katelnikoff, B. Arch., M.R.A.I.C., announce the formation of a new partnership under the name of Smith • Carter • Katelnikoff, Architects, at 289½ Garry Street, Winnipeg, Canada.

OBITUARY

WILLIAM FREDK. WILLIAMS

British Columbia lost one of its best Architects last month through the passing of Mr. William Fredk. Williams.

Mr. Williams for some years resided at Nelson, B.C. and his practice extended from there into the interior where he was widely known.

Mr. Williams became almost nationally known when he was awarded 1st prize in the Architectural Contest for the Canadian Government Pavilion erected at the World Fair in New York in 1939. Previously to winning this competition, he was awarded 3rd prize for the low cost home designed in connection with the Dominion Housing Act and 1st prize for the T. Eaton Co. Contest for house design.

An Australian by birth, Mr. Williams came to Canada in 1928 and first settled in Montreal. He came to West Kootenay to design the house of the late S. G. Blaylock of the Consolidated Mining and Smelting Company.

He served in the Engineers during World War II. His wife who survives him, also is a capable Architect. She is continuing his practice and we wish her every success.

William Fredk. Gardiner